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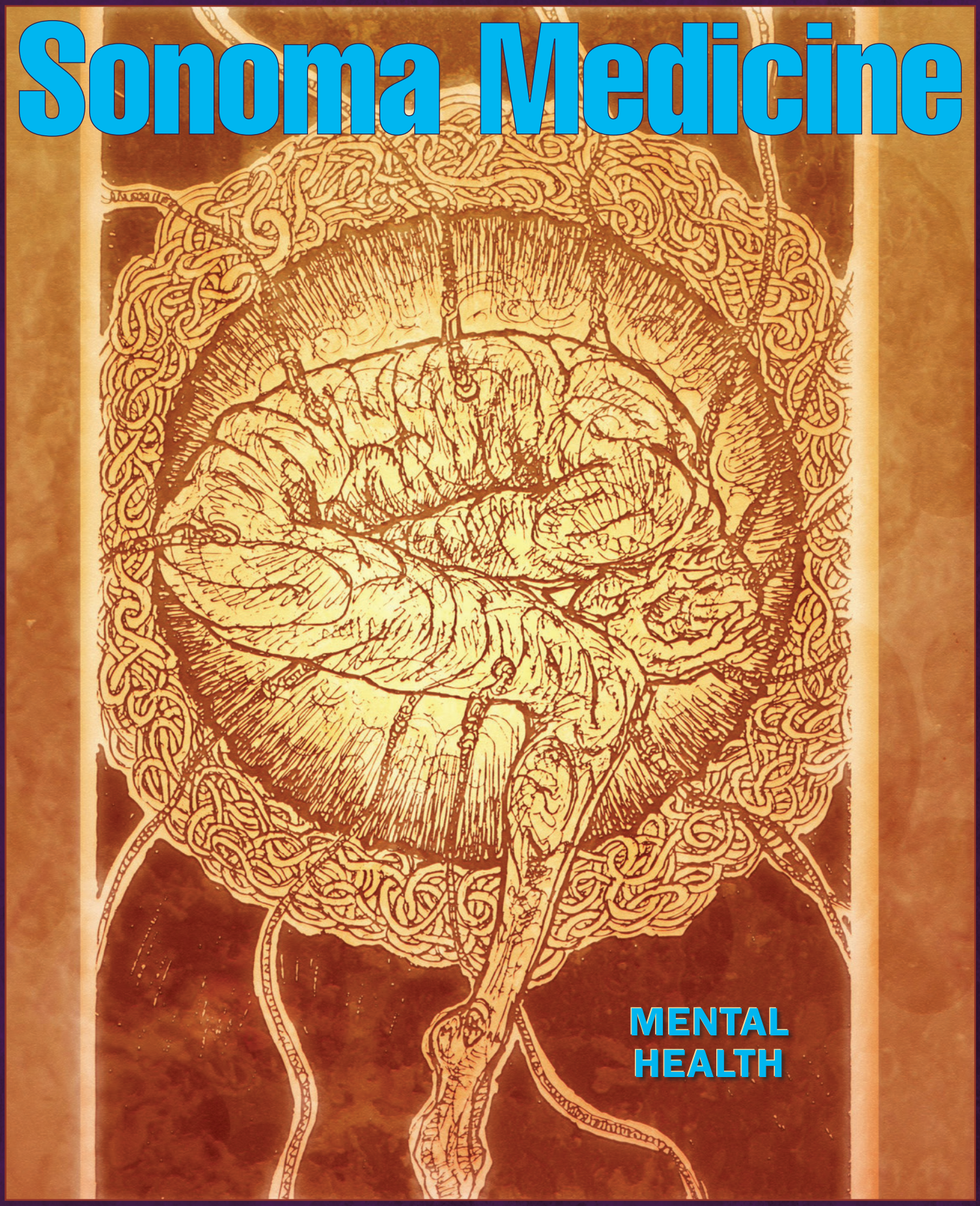

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Sonoma Medicine

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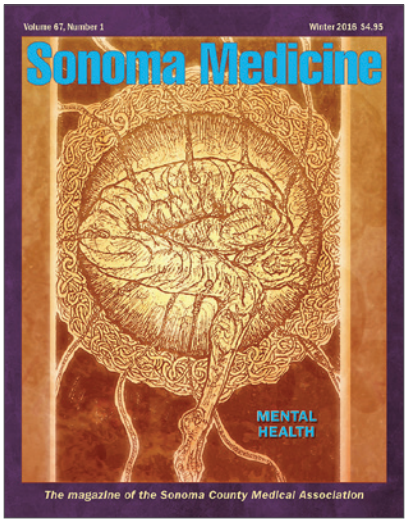

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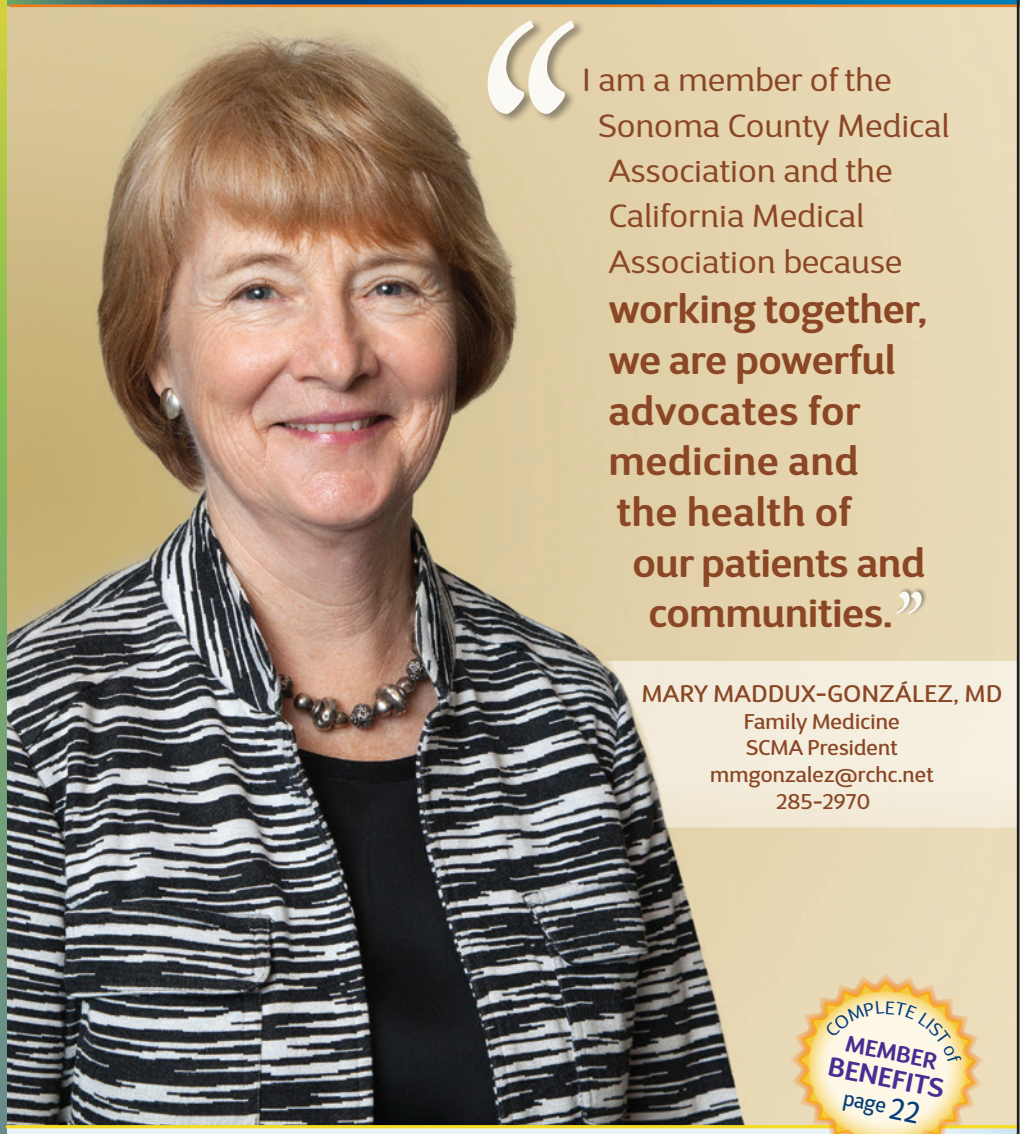

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Collaboration Is Our Hope

Jessica Les, MD

Mental health—which is inseparable from physical health—is well within the realm of primary care, yet an interdisciplinary approach is often needed to fully care for patients facing mental health problems.

"Sara" (a composite patient) is an example of the interdisciplinary approach. She is a 38-year-old mother and uncontrolled diabetic.

I met Sara when I started family medicine residency more than six years ago. Her diabetes was uncontrolled then and it remains uncontrolled today. But major change is afoot for Sara, a change that has the best chance of getting Sara's diabetes under control and preventing early death or significant morbidity by middle age. This change is not a new medication, exercise program or personal nutrition revolution. The change is to fully treat her depression.

When I first met Sara, she was shy and guarded, hard to reach by phone, and came to only about a third of our scheduled appointments. I was concerned about her mental health from our first visit together, but she wasn't concerned. She was not suicidal, so there was little I could do besides build rapport and suggest supportive changes over time. And she did make changes. We worked on building her resiliency factors, particularly social connectedness. She started making phone calls to a friend and then, with some coaxing, walking daily with that friend. Although Sara felt the benefit of these activities on her depression and her diabetes control, she was still just getting by.

Dr. Les, a family physician at the Vista Family Health Center, serves on the SCMA Editorial Board.

I gently brought up the idea of talking to a psychologist and considering medication. Each time, she laughed and said, "That is not for me, doctor. I am fine!" She did start coming more regularly to appointments, and she opened up a bit. I began to get a little window into her suffering and saw how much she needed more robust treatment for her depression; but still the answer to even considering psychotherapy and/or medication was a laugh and a no.

Last summer, Sara had a health crisis that landed her in the hospital. She became deeply depressed and disconnected from her friend, and she stopped her exercise routine. Although still not suicidal, she was extremely vulnerable. I needed to make an impactful move. Although her stance on psychotherapy or medication was unchanged, I made a different pitch: would she be interested in talking to a kind female psychologist for two minutes, right now, in this very exam room? She said yes.

This "warm handoff" was made possible by the collaborative care model launched in the community health center where I work. I stepped out of the exam room, contacted the on-call psychologist, gave her a brief summary of Sara's case, and explained my goal of connecting Sara to much-needed psychotherapy.

Moments later, the psychologist arrived in the exam room and spent a few minutes connecting with Sara, building rapid rapport and scheduling a follow-up appointment to start therapy. That was three months ago. Sara hasn't missed a single therapy appointment and has started a medication. She has become engaged with her own health, and the warm handoff was the springboard. For the first time since meeting Sara, I feel hopeful that we can not only treat her depression, but also better manage her diabetes.

I have other resources available to my patients through my clinic's collaborative mental health care model. Although many mental health conditions are well within the scope of primary care, I can request psychiatric consultation for my patients if needed. I simply send an electronic message to one of our psychiatric providers—detailing patient symptoms, tried and failed medications, or challenging side effects—and ask for a virtual medication consultation.

Sara is not an anomaly. Depression alone affects 8% of Americans and 15% of patients in primary care settings. Apart from causing patient suffering and disability, depression is also associated with poor outcomes in patients living with chronic diseases. Moreover, depression is costly, accounting for $43 billion in health care costs and $17 billion in lost productivity annually.

If you add in anxiety and bipolar disorders, schizophrenia, substance abuse, childhood trauma and perinatal mood disorders, it becomes painfully clear that a collaborative approach is needed for our patients. There are simply not enough primary care clinicians, psychiatrists and psychologists working independently from each other to care for the mental health of our population. Collaboration is our hope. ◇

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The Myth of Mental Illness and Violence

Michael Kozart, MD, PhD

Semi-automatic rifle and ammunition. *Photo by Phillip Williams.*

Mass shootings have become all too familiar in the United States. During the month of December 2015 alone, two episodes in Colorado Springs and San Bernardino rocked the nation. Seventeen people died in these incidents, and many more were seriously wounded.

Mass shootings, generally defined as an incident in which four or more people are struck, occur with alarming regularity in the United States. There were more than 350 in the past year alone, though seldom with as much loss of life as in Colorado Springs and San Bernardino.[1] Regardless of the scale, however, all such incidents cry out for an explanation. Why would anyone embark on a lethal rampage? Could it be revenge, hate, momentary impulse or sheer irrational reasoning?

Some people have speculated that mass shooters must be afflicted by mental illness because no one in their "right mind" would unleash so much harm on innocent bystanders. A recent *Washington Post* poll found that 63% of Americans believe that mass shootings "reflect a failure to identify and treat people with mental health problems."[2]

Dr. Kozart, a psychiatrist, is medical director of Sonoma County Behavioral Health.

This viewpoint has been bolstered by revelations that shooters in several recent high-profile incidents—including Sandy Hook Elementary School in Newton, Connecticut, the Century 16 movie theater in Aurora, Colorado, and the supermarket parking lot in Casas Adobes, Arizona—suffered from mental illness.

The National Rifle Association has capitalized on the purported link between mental illness and mass shootings, arguing that improvements in the mental health system, rather than tighter gun control laws, are necessary to curb future shooting sprees. The NRA's position has been taken up by many political leaders. Referring to the recent tragedy in San Bernardino, Paul Ryan, Speaker of the House of Representatives, said, "What we have seen is the theme of mental illness."[3] Ryan supports the Murphy bill, which was recently introduced by Rep. Tim Murphy to expand mental health services so that would-be shooters have access to treatment before they resort to mass violence.

Few mental health advocates would question Murphy's goal of expanding mental health services to achieve better outcomes. What is questionable is the argument that the mentally ill should be blamed for an epidemic that may have more to do with policies and beliefs around gun ownership than mental illness. Arguably, if there were more barriers to obtaining dangerous firearms, such as rapid-firing assault rifles with high-capacity magazines, there would be fewer mass shootings.

What then is the link between mental illness and mass shootings? Is there any evidence to support the claim that mental health professionals can reliably prevent and/or predict such incidents? To answer those questions, we need to inspect the research on links between mental illness and violence.

The first major study on the prevalence of violence in adults with psychiatric illness was conducted in 1990.[4] Using DSM III criteria and epidemiologic catchment area surveys, the study found a modest increase in lifetime rates of violence among those with serious mental illness. Yet the study also showed that if the elevated risk were eliminated, the overall rate of violence in society would decline by only 4%. In other words, 96% of all violent acts would continue unabated

even if mental health services were effective 100% of the time.[5] Subsequent research has demonstrated that paranoia and anti-social personality confer a slightly elevated risk of violence.[6] Other studies have shown that most of the elevated risk pertains to environmental factors, specifically unemployment, impoverishment, homelessness and childhood exposure to trauma.[7] An additional correlate is ongoing substance abuse. One study of patients recently discharged from psychiatric hospitals found that substance abuse was the single most robust variable linked to violence.[8]

Taken as a whole, these studies suggest that the relative risk of violence among the mentally ill is quite low, and that the variables linked to a small but perceptible increase in the risk of violence are so general as to leave us with little means of predicting who will actually commit violent crimes. Indeed, one longitudinal study demonstrated that clinical evaluations were no better than a flip of the coin at predicting aggression among psychiatric patients.[9]

One subset of violence, however, has a robust association with mental illness, namely suicide, which accounts for 61% of all gun-related deaths in the U.S. Research demonstrates that as many as 44% of all gun-related suicides were linked to prior histories of mental illness.[10] Interestingly, the most reliable predictor of suicide by gunshot is ownership of a gun, which outweighs all other measured independent risks of suicidal behavior.[11]

While the rate of violence among the mentally ill is low, the percentage of mass shooters who suffer from mental illness is comparably high. One review noted that 67% of all mass shooters in the U.S. and Canada from 1949 to 1998 were probably psychotic.[12] Another survey claimed that more than half of all "rampage killers" between 1949 and 1999 had serious mental illness.[13] These results help to explain the popular belief that the mentally ill should be screened as a high-risk group for gun violence. Further studies, however, indicate that three other identity traits—being white, male and socially isolated—occur at higher rates than mental illness among all shooters.[14] Few epidemiologists would argue for lumping any or all of these traits together with mental illness to screen for risk: the pool is just too large, and the rate of shooting occurrences is just too low for there to be any predictive value in studying this stratified risk group. As the authors of a recent review stated, "Psychiatric diagnosis is in and of itself not predictive of violence, and even the overwhelming majority of psychiatric patients who fit the profile of recent U.S. mass shooters—gun owning, angry, paranoid white men—do not commit crimes."[15]

A more targeted approach to gun violence has been to focus on the mentally ill who have been involuntarily committed. The reasoning here is that people who have been declared a danger to self or others, or are gravely disabled, have a higher risk for committing deadly acts. Empirical evidence supporting this approach is thin, however, and rates of violence among people who have been involuntarily committed are exceedingly random.[16] Moreover, retrospective studies demonstrate that many of the shooters with mental illness never came to the attention of mental health providers prior to their crimes.[5] Nonetheless, most state and federal policies aimed at preventing mass shootings among the mentally ill are based on limiting gun access to people who have been involuntarily committed.

The Gun Control Act of 1968 prohibited gun acquisition by people who have been involuntarily committed; but the law did not come with an effective system of background checks, making it relatively impossible to enforce. The Brady Handgun Violence Prevention Act of 1993 legislated federal background checks, which were fully implemented in 1998 through the National Instant Criminal Background Check System (NICS). In the 18 years since, only a few studies have evaluated the effectiveness of the NICS background checks at preventing gun violence among the mentally ill. Researchers on the most comprehensive study found that among the ranks of the mentally ill with no previous criminal history, "the overall impact [of the NICS] on violent crime was very small—less than one-half of 1% reduction."[5] The study also found that among the mentally ill with criminal records, the NICS restrictions had no discernable effect, likely because of the availability of firearms through illegal means.

None of this research implies that we should abandon the NICS background checks. Arguably these restrictions have made it more difficult for certain would-be shooters to acquire guns; but without a method to curb the availability of lethal weapons, a definitive approach to mass shootings seems unlikely.[15]

We are thus left with a contentious argument over the salient causes and effective remedies for mass shootings. The NRA's position is to improve the ability of mental health providers to detect and treat would-be shooters rather than to tighten restrictions on gun ownership. Yet, as we have seen, there is little evidence to support this view. Mental health providers are not well-positioned to predict, let alone prevent, gun violence, and many mental health experts view tighter gun control with prohibitions on certain armaments as the only viable method to prevent mass shootings. These opposing points of view have led to a polarized debate in which emotions swirl and political positions seem to be ever less reconcilable.

One thing is for certain: we need far more research into the factors that contribute to mass shootings. Ironically, despite the recent cascade of such shootings, research on the public health dimensions of gun violence is relatively sparse, again thanks to the NRA. Following a 1993 CDC-sponsored study which concluded that gun ownership confers more risk of homicide than safety,[17] the NRA lobbied effectively in 1996 to ban further federal funding of

gun violence research by the CDC. This ban has had a chilling effect on other federally sponsored research centers.

Lacking further research, we cannot simply conclude that mental health system enhancement will prevent mass shootings, and conversely we cannot simply conclude that a ban on assault rifles or other weaponry will be the answer either. In the end, the real story behind mass shootings may be more complex than any simple argument for or against gun control. The first step to prevention, however, is scientific investigation, which implies a commitment to objective discussion about a topic that has proven to be a lightning rod for highly fractious debate. ◇

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Common Psychiatric Conditions in Children & Adolescents

Alicia Duenas, MD

The need for quality mental health services for children is great, but the resources are few. Pediatricians and family physicians are often left to manage their young patients' mental health without much support. Meanwhile, the importance of early intervention and treatment is becoming more evident, and the medical community is beginning to recognize the impact of adverse events on the trajectory of a child's life. This impact is best elucidated by the ACE study, which demonstrated how adverse childhood events affect not only a child's mental health, but also the child's physical health.[1]

In the United States, one in five children and adolescents experience a mental health problem between the ages of 0 and 18. About half of all lifetime cases of mental illness begin before the age of 14,[2] but only half of those actually receive treatment, and there are often long delays from the first appearance of symptoms to treatment.[3]

Four common conditions seen in child psychiatry are depression, anxiety, PTSD and autism. Screening, diagnosis and treatments for these conditions are discussed below.

Dr. Duenas is a child & adolescent psychiatrist at Kaiser Permanente Santa Rosa.

Depression

Prevalence of major depressive disorder is 2% in children 0–12 years old, with a 1:1 female-to-male ratio. Prevalence in adolescents 13–18 years old is 4–8%, with a 2:1 female-to-male ratio. The cumulative incidence by age 18 in community samples ranges as high as 20%. In addition, major depressive disorder has a high level of comorbidity, ranging from 40–90%, with 50% of patients with comorbidities having more than two comorbidities.

Differential diagnosis for depression should include consideration for anxiety, dysthymia and ADHD, as well as medical disorders, such as hypothyroid, autoimmune diseases and chronic fatigue syndrome.

The American Academy of Child and Adolescent Psychiatry (AACAP) recommends that psychiatric assessments routinely include screening questions about depression. Screening should be conducted by both a primary care physician and a child and adolescent psychiatrist. A positive screening should lead to a full evaluation for depression and comorbidities, including a screen for the lifetime presence of manic or hypomanic symptoms, by a child and adolescent psychiatrist whenever possible. Establishing confidentiality and defining the limits of the confidential relationship should happen early, preferably at the initial appointment.

The evaluation must include an evaluation for self-harm, including suicidal and homicidal ideation, as well as nonsuicidal self-harm. It is also important to evaluate for risk factors (age, sex, stressors, comorbidities, impulsivity, hopelessness, access to means) and protective factors (desire, support, future orientation). Evaluation should include screening for past negative events and family psychiatric history because depression usually presents as a combination of genetic predisposition and negative environmental events.

AACAP treatment recommendations for major depressive disorder include three phases: an acute phase, a continuation phase and, in cases of higher severity, a maintenance phase.

The main goal of the acute phase is to achieve full remission. The continuation phase is required for all patients to consolidate response and prevent relapse, but the maintenance phase should focus on more severe patients or patients with recurrent illness. Treatment at each phase should include the following components: psychoeducation, supportive management, family involvement and school involvement.

Studies indicate that education, support and case management are sufficient for mild depression. In cases of more severe illness, or in children and teens who don't respond to this initial strategy, a trial with antidepressants or psychotherapy is warranted. Severe depression requires treatment with an antidepressant medication. Cognitive behavioral therapy and interpersonal therapy are beneficial for moderate depression, although some studies have indicated that combination treatment with medication and psychotherapy is only modestly superior to medication alone.

Drug therapy has demonstrated significant response rates of 40–70%, but placebo effect in this population is 30–60%. Only fluoxetine and escitalopram have been approved for treating depression in patients under the age of 18. Fluoxetine's approval is for ages 8–18 and escitalopram's for 12–17. SSRIs are generally well tolerated. Their side effects tend to be short-term and dose-dependent, and they tend to improve with time. Young children may be more susceptible to activation (increased agitation, impulsivity and irritability), which should be distinguished from mania; mania would have significant implications for treatment.

The most concerning SSRI side effect is the FDA finding of increased suicidal ideation. The rate is small but significant, with 1–3 reports of suicidal ideation in 100. The benefit-to-risk ratio, however, favors the use of SSRIs with close monitoring. Unfortunately the time to response with an SSRI is long. The adage of "start low and go slow" is still strongly recommended, with medication adjustment occurring no sooner than 4 weeks as clinically appropriate. There is limited information on the use of other classes of antidepressants with child and adolescent patients.

Psychotherapy at this time will help consolidate skills, plan for new stressors, and assist with any ongoing conflict. To reduce recurrence, some children will require longer times in treatment. Treatment should be continued for at least 6–12 months for all patients who have responded to acute treatment. Clinicians should monitor clinical status, environmental factors and medication side effects. If a patient is not responding to treatment, clinicians should consider the possibilities of misdiagnosis; unrecognized or untreated comorbidities; inappropriate pharmacotherapy; inadequate dose or length of treatment; ongoing exposure to severe life events; identity issues; and cultural/ethnic factors. Children with risk factors should have access to early evaluation and services, which may improve treatment response. (Risk factors include subsyndromal symptoms, previous depression, and family history of depression.)

Some prevention is possible. Studies have demonstrated that successful treatment of mothers with depression is associated with fewer new psychiatric diagnoses and higher remission rates.[4]

Anxiety

Anxiety is the most common form of psychopathology in children and adolescents, yet it is often missed or undertreated. According to several large epidemiological studies, prevalence rates for anxiety in this population vary from 6–20%. Girls are slightly more likely than boys to report anxiety disorder, but this pattern holds only for specific phobia, panic disorder, agoraphobia and social anxiety disorder. There may be a chronic course to anxiety disorder, although the idea of chronicity is still controversial; even when remission is achieved, children may develop other anxieties later in life. Children with diagnosed anxiety disorders have a 2–3 fold increase in depressive or anxiety disorders in adulthood. Anxiety disorders impact multiple domains of life—including social skills, family relationships and academic performance—and they can disrupt normal development.

It is paramount to distinguish anxiety disorder from normal developmental fears. Infants typically fear loud noises, being startled and, later, strangers. Toddlers fear imaginary creatures and the dark, and they have normative separation anxiety. Older children and adolescents have fears related to school performance, social competence and health issues. These normative fears begin to cross the threshold into anxiety disorders when the fears persist or impair the child's functioning.

Current AACAP recommendations for anxiety include universal screening during primary care or psychiatric evaluation, which should include information from multiple sources. If screening demonstrates significant concern, a formal evaluation should be completed by a child and adolescent psychiatrist. Differential diagnosis should consider several other psychiatric and medical conditions, including ADHD, psychotic disorders, learning disabilities, depression, hypothyroidism, caffeine overuse, migraines, asthma, seizure, lead intoxication, and abuse of prescription drugs. Less commonly occurring conditions should also be considered, including hypoglycemia, pheochromocytoma, CNS disorder and cardiac arrhythmias.

Anxiety is often associated with somatic complaints. Baseline level of these complaints should be established because medications may have similar side effects, so baseline symptoms could be mistakenly attributed to medications and inadvertently limit the treatment. Primary care physicians who see pediatric patients who have many somatic complaints without medical cause should consider mental health consultation early in treatment.

Treatment planning for anxiety should take a multimodal approach, including psychoeducation, cognitive behavioral therapy, psychodynamic psychotherapy, family therapy and pharmacotherapy. Severity and impairment

should be determined because greater severity and older age are predictors for poor treatment response to cognitive behavioral therapy alone. In these cases, integrating a parent or other family should be considered as adjunctive treatment.

Cognitive behavioral therapy has the most empirical support for treating anxiety. Its six main components are psychoeducation, somatic management, skills training, cognitive restructuring, exposure and relapse prevention. Psychodynamic psychotherapy has also demonstrated benefits in several case studies. Psychodynamic therapists view anxiety as an internal distress and conflict that motivates the individual to internalize unconscious coping strategies. The goal of the therapy is to bring anxiety back to functional levels and to regain healthy developmental trajectory. Often the psychodynamic protocol does have a parental component; an Italian study demonstrated improvement two years out from treatment.[5] Parents often play an important role in developing and maintaining anxiety. Interventions that improve family problem solving, enhance parenting skills, reinforce adaptive coping and establish appropriate autonomy have demonstrated additional benefits, although the interventions are most beneficial when a parent is also anxious.

SSRIs are the medication of choice for treating anxiety, and some recent studies have demonstrated their short-term efficacy. They are generally well tolerated, with mild transient side effects. When prescribing SSRIs, clinicians should routinely screen for bipolar disorder and family history of bipolar disorder, as well as worsening of depression or suicidality.

Benefits and risks of long-term use of SSRIs for anxiety have not been established. After a year of stability in the patient, clinicians should attempt a medication-free trial. There is no empirical evidence that one SSRI is superior to any other for anxiety. As with depression, the recommendation is to "start low and go slow" while monitoring for side effects. Other medications

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may also be considered, but there is very limited data on their use in childhood anxiety disorders.

Classroom accommodations should be considered to reduce ongoing stressors while the patient is participating in treatment. Homework assignments should be modified and/or reduced; an adult outside the classroom who can help problem-solve with the patient should be identified; and if test anxiety is present, testing in an alternative setting should be considered. These accommodations have proved helpful in reducing overall anxieties, and they can be written into the student's 504 plan or individual education plan.

Comorbid conditions should be evaluated and treated appropriately. Anxiety is highly comorbid with ADHD (one-third of children with ADHD have co-occurring anxiety), depression, oppositional defiant disorder, language disorders, learning disabilities and substance abuse (greater risk for alcohol abuse in adolescence). Early assessments, interventions and prevention should be considered. Older age increases severity of symptoms, as do family difficulties—early intervention and prevention may help alleviate some symptoms. These interventions can be achieved through community screening, group cognitive behavioral therapy, media- and community-based psychoeducation, parent skill training, and screening for parental anxiety. Parent skill trainings that teach anxiety management and foster healthy parent-child relationships may reduce the development of anxiety disorders.[6]

Trauma/PTSD

One in four children will experience a significant traumatic event before adulthood. Although most children are resilient, 30% will develop enduring symptoms of post-traumatic stress disorder beyond the first month, with overall lifetime prevalence at about 9.2%, with 3.7% in males and 6.3% in females.

Differential diagnosis for PTSD needs to be considered. Because of overlapping symptomatology, PTSD is often confused with ADHD, oppositional defiant disorder, panic disorder, bipolar disorder, and primary substance use disorders.

Current AACAP recommendations for PTSD include regular screening for traumatic events in every initial primary care or psychiatric screening. If the screen demonstrates significant symptomatology, formal evaluation for PTSD should be conducted. There should be a comprehensive treatment approach that includes the mental health provider, the school and the primary care provider (once releases are obtained). Trauma-focused psychotherapies should be considered first-line treatment. Trauma-focused cognitive behavioral therapy (TF-CBT), which focuses on specifics of the child's trauma, has proven superior to nonspecific or non-directive therapies. Cognitive behavioral intervention for trauma in schools (CBITS) is the best-researched group treatment, and the Seeking Safety program has demonstrated some benefit for treatment in both group and individual treatment of PTSD.

Psychopharmacology may be considered for PTSD when there is a need for immediate symptom reduction or when psychotherapies have not reduced symptoms. There is limited research in children and adolescents on the effects of medications for PTSD treatment improvement. Adult data demonstrates some efficacy in use of SSRIs, but due to differences in physiology and manifestations, clinicians need to apply the adult literature with caution. Early preliminary results for SSRIs were later attributed to placebo effect.

Limited evidence supports the use of alpha and beta adrenergic blocking agents, as well as novel antipsychotic, non-SSRI antidepressants, mood stabilizers, and opioids (in children with burns). Comprehensive treatment includes school-based accommodations, such as ensuring protection from realistic ongoing threats or dangers. Lastly, screening for PTSD should be conducted after large-scale traumatic events for secondary prevention and early identification.[7]

Autism/ASD

DSM-V incorporates several prior categories (autism, Asperger's, childhood disintegrative disorder, Rett's disorder) into a single autism diagnosis. The diagnostic domains are reduced from three to two, focusing more on social communication and interaction deficits and on restricted repetitive patterns of behaviors. DSM-V also changes the strict requirement of onset before age 3 to early development and includes the potential of sensory deficits as well as severity scales for impairment in the two core domains.

The prevalence of autism as determined by the CDC is about 11.3 in 1,000. Autism is four times more common in males than females, yet females who are affected tend to have more significant intellectual disabilities. The etiology of autism is still not fully understood, but EEG abnormalities, postmortem brain studies, and functional and structural MRIs suggest a role for neurobiological factors. Reasonable evidence also suggests that familial patterns and genetic factors contribute to the development of autism.

Current AACAP recommendations for autism include universal screening. Autism must be differentiated from developmental disorders, such as expressive and receptive language disorders, sensory impairments, OCD, reactive attachment, intellectual disability, selective mutism, and other anxiety disorders.

If the screen for autism is positive, a multidisciplinary evaluation is indicated, including medical, psychological and communication assessment, as well as consideration of occupational therapy and physical therapy. Medical workup should include physical exam, hearing screen, Wood's lamp exam for signs of tuberous sclerosis, and genetic testing, including G-band karyotype, fragile X and chromosomal microarray. Referrals should be considered to evidence-based, structural educational and behavioral treatments, including

applied behavioral analysis; communication interventions in coordination with speech therapy to maximize and promote language, including alternative forms of communication; and individualized educational plans for the child.

Drug therapy for autism should be used when it is targeted at specific symptoms, or to treat comorbidities, and always in conjunction with parent training. Risperidone and aripiprazole have been approved by the FDA to treat irritability in autism, generally associated with aggression, self-harm or severe tantrum behaviors. Other drugs have demonstrated some benefit for treating symptoms of autism: alpha agonists for irritability and hyperactivity; as have fluoxetine and clomipramine for repetitive behaviors; and methylphenidate for hyperactivity and inattention.

Physicians should ultimately not shy away from inquiring about alternative treatments for autism. Although little evidence supports these treatments, many families will nonetheless pursue alternatives so they can offer their child "everything." These treatments may have no proven benefit, but most are harmless. A few treatments, such as chelation, do have significant risks, but all have an indirect impact on the families' diversion of parental and financial resources. A nonjudgmental discussion with their physician can help lead families to evidence-based treatments.[8]

Summary

Depression, anxiety, PTSD and autism are but four of the most common psychiatric conditions that affect children and adolescents. Other conditions include attention deficit disorder, obsessive-compulsive disorder and conduct disorder. The scope and variety of all these conditions speaks to the need for paying more attention to the inner lives of our youngest patients. Their future depends on consistent screening, diagnosis and treatment for conditions that may affect their mental health.

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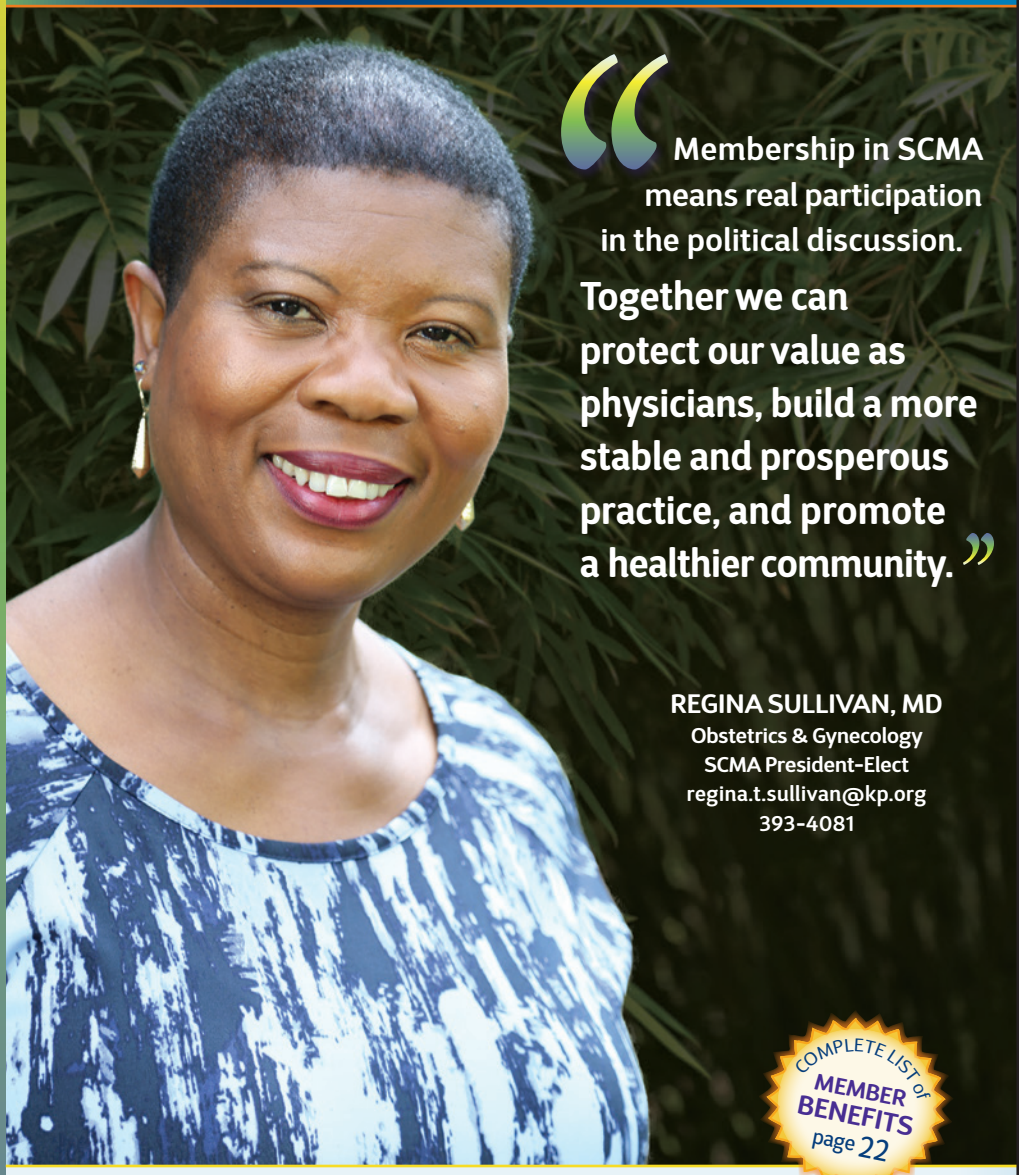
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Early intervention and treatment can have a significant impact on re-establishing normal development and mitigating the chronicity of these conditions for individual children. As a public health initiative, early intervention could also dramatically reduce health care costs for society. The link between negative early childhood events and their impact on long-term health and health care utilization is being firmly established.

Practice parameters for child and adolescent psychiatric conditions can be found on the American Academy of Child and Adolescent Psychiatry website at www.aacap.org. ◇

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Sharing the Care

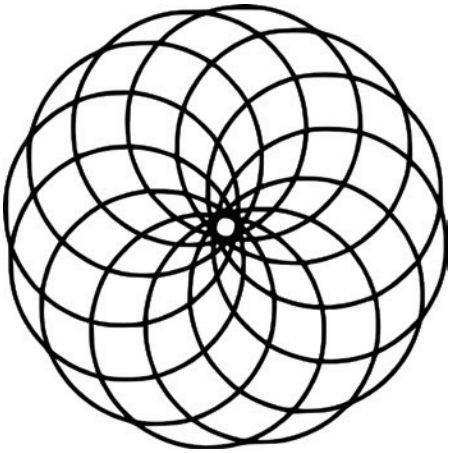
Maryellen Curran, PhD

Dawn (not her real name) is a 47-year-old patient now covered by Medi-Cal thanks to the Affordable Care Act. When she presented at a local community health center, she hadn't seen a doctor for the past nine years because her husband had lost both his job and the family's medical benefits. She and her family had since used local emergency rooms for health care. Once she received Medi-Cal coverage, she called the health center to establish care with a primary care physician (PCP).

Dawn's main reason for coming to the health center was her fear that she had epilepsy. She reported that she had been having "convulsions" once or twice a week and was certain that she was very ill. She dreaded a serious diagnosis but realized she needed to get help.

Dawn was certain that she was having convulsions because she "knew what they looked like." She had raised a son with a series of congenital and developmental problems, and he had many seizures during his early years. Ten years ago, just when the doctors thought her son was getting better, he had a massive seizure and died at age 15.

Dawn asked her new PCP for a series of tests to determine if she also had a seizure disorder. She had been worrying that she would die like her son and was depressed that she would leave her other three children motherless. Her physician listened carefully, recognized signs of anxiety and depression, and offered her an SSRI, questioning her self-diagnosis of epilepsy.



Source: Nevit Dilman

Then Dawn's PCP called for a "warm handoff" to a psychologist to help sort out Dawn's symptoms and offer her information about the value of psychiatric medicine and cognitive behavioral therapy for her anxiety, prior to ordering any tests. Warm handoffs can greatly benefit patients because PCPs often lack the time to help patients with significant psychological and psychosocial issues.

The health center has an integrated behavioral and mental health team of 10 clinicians, and the PCP asked for a team psychologist to come to the exam room right away to meet with Dawn. The physician hoped that Dawn would agree to psychotherapy but also valued having another set of eyes on the patient to determine if her presentation was panic disorder, pseudo-seizures or truly a neurological condition.

Within minutes, a psychologist arrived to meet with Dawn, who described the classic symptoms of intense panic attacks. She also talked about her agoraphobic tendencies, as well as her unresolved, complicated grief over the death of her son. The psychologist spent about 20 minutes talking with Dawn, telling her about panic disorder while recognizing the underlying dynamic connections to her son's death. It was a perfect opportunity to invite Dawn into a course of psychotherapy, available right across the hall with the same psychologist.

Dawn agreed to schedule the appointment, and with the awareness that she was more likely experiencing panic attacks than convulsions, she accepted the idea that an SSRI could help reduce some of her anxiety. She left the visit feeling heard and reassured. Dawn now had a treatment plan that involved medication, therapy and a strong care team.

Dawn subsequently came to eight individual therapy sessions and attended an anxiety education group. A month later, when she returned to see her PCP, she said the SSRI had given her some relief. The PCP consulted with the staff psychiatrist by phone during the visit and adjusted Dawn's dosage to address her anxiety more directly. Psychiatrists in the health center use a collaborative consultation model in which the PCP prescribes most medications but has access to the psychiatric staff for consultation. In more complicated cases, the PCP can have a psychiatrist meet with the patient for a medication evaluation, followed by several visits with the psychiatrist until the patient is stabilized and returns to the care of the PCP.[1]

Dr. Curran directs the integrated behavioral and mental health program at Santa Rosa Community Health Centers.

Dawn is now aware that her panic attacks and agoraphobic tendencies were triggered by recent family and economic stressors. She also has some insight into why her symptoms mimicked her son's epilepsy as a possible reflection of unresolved grief. Without the intervention made by her care team, the medical treatment plan could have taken a much costlier direction. The PCP could have ordered a series of expensive imaging tests and referred her to a neurologist. Instead, Dawn received immediate behavioral health care and gained the confidence to manage any future panic attacks. She is no longer suffering with worry and dread.

Dawn's story is an example of the integration of primary care and behavioral health. The Affordable Care Act has accelerated changes in the delivery of mental health services within general medical settings. In traditional settings, the presence of a psychiatric diagnosis can interfere with management of chronic health conditions and increase the cost of providing health care. In contrast, integrating primary care and behavioral health can significantly reduce costs.[2]

Dawn's care at the health center is an example of "integrated behavioral health care," a treatment model that evolved from the observation that many patient visits to PCPs are driven by psychological problems, such as depression, anxiety, stress, and panic.[3] While PCPs refer many of these patients to mental health providers, few patients carry through.

The integrated behavioral health care (IBHC) model has been defined as, "The care a patient experiences as a result of a team of primary care and behavioral health clinicians, working together with patients and families, using a systematic and cost-effective approach to provide patient-centered care for a defined population."[4]

IBHC has gained traction over the past decade, reaching more patients, improving quality of overall care, and increasing patient satisfaction with their health care.[5] For many patients, the stigma of getting mental health treatment is significant enough to prevent them from following through on their doctor's recommendation to seek counseling or psychotherapy. This avoidance of mental health care also includes reluctance to go to a psychiatrist for psychotropic medications.

Having PCPs, psychiatrists, psychologists and clinical social workers all available under one roof normalizes mental health as a part of overall health care. IBHC enables the medical team to normalize and demystify mental health treatment for the patient. For patients with chronic diseases, regular use of warm handoffs, motivational interviews for behavioral change, psychiatric consultation and on-the-spot psycho-education can help address behaviors that undermine health. Operating as behavioral health coaches, therapists are able to provide health education to patients and offer stress management strategies as well.[6]

In 2013, the Substance Abuse Mental Health Services Administration published a standard framework for integrated health care.[7] At the lowest level, care is coordinated in a more traditional way, with providers communicating and collaborating at a distance. The next level is to have collaboration onsite with some system integration. This is currently the practice in many local community health centers.

The vision for the future is to have true integration, with multidisciplinary membership on a dedicated care team with full collaboration and regularly scheduled communication about patient care. The care team would include a primary care provider, medical assistants, nurses, psychologists and pharmacists, with access to psychiatrists, health educators, physical therapists and other specialists as needed. The entire care team would care for a dedicated panel of patients.

Integrating primary care and mental health offers new challenges and opportunities for all members of the care team. Ultimately, patients will benefit from overall improvement in their health, both mental and physical. ◇

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Mental Health Treatment at the Sonoma County Jail

Gary Bravo, MD

Main Adult Detention Facility in Santa Rosa.

There has been much concern lately about the "criminalization" of mental illness, with the claim that prisons and jails have become the de facto psychiatric hospitals in the United States.[1] In Sonoma County, the number of inmates with mental illness housed in the county's jail system is growing and pushing on the jail's capacity to handle and treat them. This growth has led various county agencies to approve new programs and new construction specifically targeted to improve the assessment, treatment and follow-up care for people with mental illness who are accused or convicted of a crime.

This article only covers inmates with mental illness in jails, not prisons—although prisons deal with many of the same issues. Prisons in California are reserved for inmates who have been sentenced to more than three years of incarceration. Jail populations are more transient and heterogeneous. About 50–60% of inmates with mental illness in the jail population are awaiting adjudication of their charges.

Before we begin, a dual-purpose disclaimer and list of qualifications: I have worked as a staff psychiatrist at the Sonoma County jail; as medical director of Sonoma County Behavioral Health, which includes clinical services at the county's jails; as a forensic psychiatrist for the Incompetent to Stand Trial misdemeanor program; and as a consultant to local courts on mental health issues.

My preference in practicing psychiatry is to work with people with serious mental illness, and I find correctional psychiatry to be fascinating and rewarding. Treating patients in an institution that is designed for safety and security, under the constraints of the penal and legal systems, as opposed to a therapeutic or medical environment, can be challenging. Lengths of stay for inmates can be long, allowing positive change to be witnessed; and working to help a generally disenfranchised population in an extreme situation—with all the complex human, ethical, existential and societal issues involved—can be gratifying.

"Something is wrong when we use the criminal justice system as a mental health system," observed Sen. Al Franken (D-Minn) when he introduced the Justice and Mental Health Collaboration Act of 2013, which is still awaiting passage by Congress. Franken was referring to statistics showing that about 2 million people with serious mental illnesses are booked into county jails each year. The counties must provide these people with treatment, although jails are generally ill-equipped and not well budgeted to treat them. As reported in a recent *Psychiatric News*, people with mental illness "are arrested in disproportionate numbers, stay longer

Dr. Bravo works as a forensic psychiatrist at Sonoma County Behavioral Health.

in jail, have higher recidivism rates, and have less access to health care than those without mental illness."[2]

An estimated 16% of jail inmates nationwide have a serious mental illness, as compared to 5% of the general population.[3] In addition, 72% of inmates with mental illness have a coexisting substance use disorder, as opposed to about 51–60% of all people arrested.[3] Exact figures are hard to come by, given the transient nature of the jail population, the lack of a centralized data-gathering system, and the various criteria for defining "serious mental illness." The latter term usually refers to people with psychotic symptoms, such as hallucinations, delusions and formal thought disorders; and also to people with various diagnoses who may exhibit extreme mood and behavioral issues.

Although hard evidence is lacking, the three most commonly cited reasons for the increasing number of people with mental illness in jails are (1) "deinstitutionalization" of patients from state hospitals to the community (2) increasing paucity of psychiatric hospital beds, and (3) harsher and inflexible sentencing for low-level drug offenses.[1] In addition, people with chronic psychiatric illness often have no income or rely on minimal disability payments and cannot bail themselves out of jail. Lack of adequate housing, substance abuse treatment and community-based mental health treatments have also been cited as causes of the increase in the number of inmates with mental illness.

The criteria for holding people with mental illness against their will are narrow: the person has to be an immediate danger to self or others, or unable to provide for their own food, clothing and shelter. The criteria for involuntary administration of psychiatric medications are even stricter. In my experience, people with psychiatric illness who are released from psychiatric facilities because they do not meet the criteria for further confinement often show up in the county jail for minor charges, such as trespassing, resisting arrest, shoplifting, being under the influence, possessing drugs or drug paraphernalia, or failure to appear.

Sonoma County has two jails, both of which are operated by the sheriff's department, and combined they house approximately 1,000–1,200 inmates at any one time. The Main Adult Detention Facility (MADF) is located in the county administration complex in Santa Rosa. The North County Detention Facility is located next to the Sonoma County Airport and houses inmates who are seen as a lower security risk. The sheriff's department contracts with Sonoma County Behavioral Health to provide mental health services in the jails. Medical services are contracted to a private statewide agency, the California Forensic Medical Group (CFMG).

County mental health staff provide 24/7 coverage at the MADF and operate as an interdisciplinary team, consisting of licensed clinical social workers, marriage and family therapists, psychiatric technicians, psychiatrists, physician assistants, and psychiatric nurse practitioners. The team also includes a full-time discharge planner, a social worker who is committed to restoring to competency those who are incompetent to stand trial, and a suicide intervention specialist. Nursing functions, including medication distribution, are handled by CFMG, as well as pain management and substance withdrawal.

When a person is arrested, he or she is brought to the MADF and undergoes a booking process, at which time a sheriff's officer asks a few screening questions for medical and mental health issues, such as "Do you take any psychiatric medication?" and "Are you or have you ever been suicidal?" If the answer to any of the mental health questions is yes, the person (now an inmate) is screened by a mental health clinician to give the jail staff guidance as to whether the inmate goes to a mental health unit in the jail or to the general population of inmates.

When a person is bailed or cited out after booking, a clinician needs to determine whether the psychiatric symptoms meet the criteria for a 5150 involuntary confinement. If not, the clinician decides whether to refer the person to a psychiatrist or mid-level practitioner for medication evaluation or diagnostic clarification.

The MADF has three mental health modules whose purposes are to allow closer observation by jail staff and to keep mental health inmates from being victimized by the more hardened criminal culture in the general population of inmates, who are housed in seven other modules. The percentage of inmates with serious mental illness at the MADF is difficult to estimate, but based on the number of specialized mental health units, it is probably around 10–15%.

The first mental health module is a 30-bed facility for inmates with the most acute issues. The second is a 48-bed intermediate module, and the third a 60-bed module for inmates with significant mental health issues but stable behavior. There is constant movement between the mental health units, as inmates get stabilized or "decompensate" (get worse), and also movement between the mental health units and the general population of inmates. In addition, mental health staff follow about 70–80 inmates at the North County Detention Facility who are not categorized as seriously mentally ill but are generally on a psychiatric medication.

Medical and mental health treatment in jails is governed by the California Welfare and Institutions Code, and by state and federal guidelines. These requirements stipulate that inmates have a right to treatment and should have a way to communicate their needs and be seen in a timely manner. A system of screening and evaluation by qualified mental health professionals is also required, as are complete, accurate and confidential medical records, along with quality assessment and performance improvement. Finally, there must be a suicide prevention program. In short, mental

health care in jails should be comparable to local community standards.

Prescribing psychotropic medications to inmates is subject to informed consent, and medication is not to be prescribed for the sole purpose of controlling behavior to "manage" inmates. Emergency medication can be administered when there is an immediate danger of self-harm or injury to others. Otherwise, involuntary medications can only be given when (1) the inmate lacks capacity to consent and (2) a court hearing with a judge and legal counsel is available to the inmates.

The priorities for the psychiatrists, PAs and NPs at the jail are psychotropic medication management and suicide risk assessment; inmates with serious mental illness are given priority. Practitioners have to become familiar with the common psychiatric issues in the jail—adjustment disorders, anxiety, insomnia, trauma including PTSD, non-suicidal self-injury, malingering, and various types of substance-related disorders. Despite media exaggeration and stereotypes, inmates with acute mental illness who have committed serious violent crimes, such as murder, are rare.

In addition to the mental health services mentioned above, several programs in the jail are targeted to inmates with mental health issues and/or substance use disorders; a full listing is beyond the scope of this article.

All inmates followed by mental health providers are screened by clinical staff upon release to the community and given referrals for follow-up. If they are on psychiatric medications, they are given a two-week prescription with instructions to follow up with their medical or mental health provider or the Brookwood Clinic in Santa Rosa, where they can get same-day appointments, mental health care and help with benefits.

Sonoma County Behavioral Health, the sheriff's department and county administrators are working on a number of initiatives to deal with the increasing number of mentally ill inmates. The county has just obtained a federal grant to help construct a new 72-bed jail facility that is specifically designed to house mentally ill inmates, with attention to the special needs of this population, such as less isolation and more activities and out-of-cell time.

In addition, the county has agreed to take part in a pilot program to restore Incompetent to Stand Trial (IST) inmates in the jail to competency. Currently, when an inmate charged with a felony is found to be IST, criminal proceedings are suspended and the inmate is ordered to a state hospital to be restored to competency. The waiting period is often 4–6 months, during which time the inmate stays in jail. As part of the new program, a jail module is being remodeled to house IST inmates. (The county already provides restoration services to ISTs who are only charged with a misdemeanor. That effort has been successful in reducing length of stay in the jail and transferring inmates from the criminal system into the mental health system.)

Other programs offer pre-booking and pre-trial diversion of mentally ill people to mental health treatment. For example, the county has a mental health court where mentally ill inmates can be ordered to be released on a probationary status and receive intensive mental health services from the Forensic Assertive Community Treatment team.

Sonoma County Behavioral Health has also partnered with the sheriff's office and the various city police departments to avoid the "criminalization" of mental illness by collaborating on Crisis Intervention Teams, where mental health/substance counselors respond with officers in the field to situations involving individuals having a mental health crisis. Law enforcement officers also undergo intensive training on handling mental health emergencies.

As a clinician concerned about the treatment of inmates with mental illness in our correctional system, I see Sonoma County making efforts to "decriminalize" individuals undergoing mental health crises. This is a tall order, however, and not just a local one. It will take collaboration and cooperation between health care providers, law enforcement, the justice and penal systems, behavioral health consumers, civil rights advocates, elected officials, and government administrators. I'm hoping our society has the public and political will to make it happen. ◇

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Boosting the Local Health Care Workforce

Kathy Goodacre

As the Sonoma County economy continues to grow, local employers across all industries are experiencing a workforce shortage. These employers report a significant skills gap among available applicants, many of whom lack the necessary technical and "soft" skills.

Health Careers Academy students scrubbed and ready to learn.

The adequacy of the health care workforce is especially impacted by several factors, including the growth in the insured population as a result of the Affordable Care Act; more and more elderly patients; an aging workforce; and the demand for diversity in the workplace.

According to the Alliance for Health Reform, the demand for direct care and allied health workers will grow by almost 35% by 2018, including medical assistants, nursing assistants or aides, and home health aides.

Fortunately, efforts are underway in Sonoma County to address these staffing needs through an education partnership that includes the Sonoma County Office of Education, Santa Rosa Junior College, and the Career Technical Education Foundation, with industry support from Kaiser Permanente, St. Joseph Health, Sutter Health, Sonoma County Health Services, and other health care providers. These partners have designed a countywide training system that links high school students with post-secondary certification, licensing and/or degrees that lead to health careers. A primary goal of this "pipeline" system is to educate students about career opportunities in health care and give them a chance to explore the careers. The system also helps students develop long-term career goals and make an academic plan for achieving those goals.

The pipeline system, which was made possible through industry support (including a $150,000 grant from Kaiser Permanente Northern California Community Benefit Programs), currently serves 48 students annually, and consists of two programs: the Health Careers Academy and the Summer Health Careers Institute. Both are designed to introduce high school students to health care careers through lecture, lab and fieldwork experiences. The programs draw high school students from throughout the county. Classes and other activities take place at Santa Rosa Junior College and Kaiser Permanente facilities.

The Summer Health Careers Institute is a full-time summer training program for local junior and senior high school students held at Santa Rosa Junior College. Most of the students are first generation, bilingual, bicultural, and/or low socioeconomic status. Many of their parents are immigrants with only elementary level education.

Students at the institute visit health care sites, learn from a variety of speakers, and attend labs and lectures. The institute offers hands-on education, an introduction to a network of health care

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Ms. Goodacre is executive director of the Career Technical Education Foundation. Stephen Jackson, director of Career Technical Education Support Services at the Sonoma County Office of Education, and Musetta Perezarce, RN, also contributed to this article.

Summer Health Career Institute class of 2015 at SRJC.

professionals, and opportunities for students to consider a career in health care. Twenty-one students from high schools throughout the North Bay graduated from the institute last summer.

The Health Careers Academy is a two-semester program that includes class lectures and activities to help high school students explore a health care specialty of interest with a foundational understanding of health care systems, processes, culture and ethics. Courses at the academy are intended to help students learn how to deliver excellent patient care with quality outcomes.

Once a week, students in the academy suit up in scrubs, pull back their hair, and jump into a health care department at Kaiser Permanente. By shadowing in these health care settings, students are exposed to a variety of disciplines, ranging from placing a cardiac diet dinner on a patient tray to watching a physician suture a wound in the emergency department. For the students, observing patient care in real settings is as valuable as learning the biology behind the patients' medical diagnoses.

To ensure that students embrace a culture of service, they are required to participate in activities that foster these skills and build their capacity for genuine, skilled service delivery. Peer-evaluation models like AIDET (acknowledge, introduce, duration, explanation, and thank you) help students develop a service-oriented model of care from the beginning of their medical education. Musetta Perezarce, RN, coordinator and teacher for both the Summer Health Career Institute and the Health Career Academy, notes that, "An excellent care provider is more than just an academic scholar. Care providers must be self-aware, give generously with integrity and appropriate boundaries, and navigate the emotional and social world of a patient."

Perezarce's experiences in patient care and nursing leadership, coupled with her own story as a fragile teenager exposed to illness, have helped shape the programs' emphasis on student character, mentors and quality education. She has also implemented a program called Crucial Conversations that addresses communication skills specific to conversations with high stakes, high emotions and high conflicts. "Health care research demonstrates that communication skills are crucial to achieving patient outcomes," Perezarce observes. "We want our students to learn communication skills that advocate for best patient outcomes."

Partners in the academy and institute are striving to expand the programs and include more high schools and students. Other goals include:

- Expanding openings and opportunities for post-secondary certificate, licensing and degree programs. Many of these programs at SRJC and Sonoma State have little room for more students.
- Exploring the challenges of clinical supervisions. More opportunities are needed for students to shadow in a clinical setting.
- Securing approval from SRJC for offering Regional Health Care Work-Based Learning as an SRJC course. Plans have been submitted and should be approved for the Fall 2016 semester.
- Providing more support services, including tutoring and mentoring, for students as they complete rigorous and challenging health care courses and prerequisites.

Plans are underway to reopen the Health Occupation Preparation Education Center at SRJC, which would provide these services.

None of the programs discussed above would be possible without critical participation and support from our local medical community. Preparing students for health careers requires additional funding, opportunities for work experience, and career mentors. The CTE Foundation estimates that the annual cost per student is around $340. Adding 22 students to the program would cost $7,700 annually, with an additional cost for books and supplies at $3,000.

Other ways the medical community can support these training programs include:

- Volunteering as mentors.
- Giving tours of health care facilities.
- Allowing students to participate in research and community health projects.
- Serving on an advisory committee to promote health care workforce training.

To find out more about how you or your organization can participate in and support these vital workforce development programs, contact Kathy Goodacre at 707-537-1679 or kgoodacre@ctesonomacounty.org. More information is available at:

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A Young Patient with Multisystem Illness

David Sidney, MD

Mike (not his real name) is a previously healthy male in his third decade of life who recently experienced spiking fevers and a cough. The fevers sometimes rose to 103 or 104, and they would resolve with acetaminophen and liquids. A sore throat, if he had one, was mild and present only early on. He had no rhinorrhea; no headache, vision or hearing changes; no muscle or joint aches; no rash or skin changes. Yet, his symptoms were severe enough for him to quit work 14 days prior to hospital admission.

As the symptoms persisted, Mike developed anorexia and lost 20 pounds. He was seen twice at Urgent Care, where he was prescribed amoxicillin/clavulanic acid and azithromycin. Experiencing no improvement, he saw his primary care physician. The following day he was evaluated in an emergency department and admitted to a local hospital.

Prior to admission, Mike was debilitated to the point of needing help navigating the stairs to leave his home. He had developed lower back pain several days earlier, as well as suprapubic abdominal pain. Despite drinking ample fluids, he indicated he was not passing urine. The day prior to admission he had nausea and vomiting, but no diarrhea. On the review of systems at hospital admission he denied headache, photophobia, blurred vision, tinnitus, neck rigidity, substernal or pleuritic chest pain, pain in the arms, weakness, numbness, or tingling in any of his extremities.

In the ED, Mike was found to have a fever of 101.2, tachycardia at 112 and oxygen saturation of 94–100% on room air. He appeared to be in mild acute distress. His neck was supple. Fine crackles were appreciated throughout his lungs, but without ronchi and only minimal wheezing. No cardiac murmur was described, and the rhythm was regular. On abdominal examination, there was mild suprapubic tenderness but no guarding or rebound tenderness. Bowel sounds were normal, and there was no Murphy's sign. Examination of the back found tenderness of the spinal musculature, but not of the spinous processes themselves. Documented neurologic examination was limited to the cranial nerves, which were found to be intact. Skin examination found only fine petechiae on the upper chest.

The initial WBC count was 11.2 with 7% atypical lymphocytes. Lactate was normal, as were chemistries and LFTs except ALT 75. C-reactive protein, sedimentation rate, procalcitonin, ANA and RF, quantitative IgE, Quantiferon, HIV, rapid influenza A & B, and genetic testing for cystic fibrosis and alpha-1 antitrypsin were ordered on admission. Urinalysis was pristine. Blood cultures were drawn.

Imaging workup on the day of admission included a CT of the abdomen and pelvis, which showed a distended bladder. Indeed, more than 1,000 cc of urine was obtained via Foley catheter. An MRI of the L-spine, however, revealed no acute pathology. A chest x-ray showed diffuse hazy bilateral lung opacities. A CT of the chest subsequently confirmed increased consolidation versus atelectasis in the posterior left lower lobe, mild posterior right lower lobe atelectasis, and ground glass micronodules with tree-in-bud appearance in the right upper, middle and lower lobes, and in the left lingula and left lower lobe. Based on these results, Mike was admitted for atypical pneumonia and urinary retention.

Mike smoked less than half a pack of cigarettes a day prior to the onset of his illness. He would typically drink 12–15

Dr. Sidney is a Santa Rosa infectious-disease specialist.

cans of beer per week. He denied any current recreational drug use, but he did have a history of heavy marijuana use 10 years earlier. He was sexually active in a monogamous relationship with the same partner for four years. He has never had a sexually transmitted disease, and to his knowledge, neither has his partner. He has not travelled. He does not have much outdoor exposure, and what exposure he does have is on golf courses. He has a dog but has not seen ticks on himself or the dog. He has never been incarcerated. His family history is strongly positive for autoimmune and rheumatologic conditions on his mother's side. His mother says she had been diagnosed with rheumatoid arthritis and reports lupus and other connective tissue disorders in her relatives. There is a history of premature coronary artery disease on his father's side.

On the day of admission, Mike was started empirically on moxifloxacin and fluconazole; the latter was discontinued the following day, when oseltamivir phosphate (Tamiflu) was started. By that time he had defervesced. After admission, perhaps the second day, he developed new symptoms, namely an icy cold sensation in his feet and muscle pain in his calves and thighs. He still denied having muscle pains elsewhere, and he denied having any joint pains. Also after admission, he developed "discomfort" with the ambient light, but continued to deny frank headache and had no neck stiffness. Nevertheless, on hospital day four, a lumbar puncture revealed lymphocytic pleocytosis. Of the 128 white blood cells, 94% were lymphocytes and just 6% neutrophils. There were only eight red blood cells, and the protein and glucose were normal.

My infectious-disease consultation was requested the following day, which was day four of hospitalization. Ironically, that same day Mike's mother reported a remarkable improvement in her son's condition, as suddenly "as if a light switch had been flipped." Indeed, the bright room lights re-mained on throughout my interview and exam, with Mike's consent; that was the brightest the room had been since admission. Mike also had visibly more energy, though he continued to be weak; that day he had done little more than get out of bed to sit in a chair. When Mike had walked with a physical therapist on the previous day, his mother said that his legs did not appear to be moving in synchrony with his hips. He indicated this was because of weakness, as opposed to pain or lack of muscle control.

My physical exam of Mike was quite unremarkable. He had been afebrile for the last 48 hours. Most notable were small petechial lesions on his forehead. Mike has had crops of these intermittently since high school. They are largely confined to his face and are asymptomatic.

Mike was a healthy-appearing male who was alert and oriented O x 3 and in no acute distress. His neck was supple, and he was almost able to touch his chin to his chest. His lungs were clear to auscultation. Cardiac exam was normal. There was no tenderness to palpation over the spinous processes or paraspinous musculature. Bowel sounds were slightly diminished, but the abdomen was soft, nontender and nondistended. A Foley catheter was draining clear urine. The extremities had no cyanosis, clubbing or pitting edema. His feet were not cold. No swelling, warmth or erythema of the joints was present either. Muscle tenderness was on the distal thighs just proximal to the knee (in a distribution strongly reminiscent of where one squeezes to tickle someone on the knees). There was no tenderness to palpation over the Achilles tendons or insertion. Neurologic exam was grossly intact with the patient moving all four extremities but with bilateral lower extremity weakness.

Mike's white blood cell count the previous day was 7,700, down from 11,000 two days earlier, and the differential was now normal. A sedimentation rate on 11/21/2015 was 53. C-reactive protein was 14 mg/L on 11/21/2015 and by 11/24/2015 was down to 5 mg/L. Procalcitonin was 0.34 on presentation. Chemistries were normal, and as on admission, the liver function was normal, except for alanine transaminase now in the 60s. The Quantiferon test for tuberculosis was indeterminate. Assays for HIV and influenza A & B were negative. Genetic analyses for cystic fibrosis and alpha-1 antitrypsin were negative. Cultures of blood, sputum and cerebrospinal fluid were negative.

Shortly after examining Mike, I ordered a test to confirm my diagnosis.

What is the diagnosis?

Readers are encouraged to answer that question for themselves before turning to the discussion on page 31. No peeking! ◇

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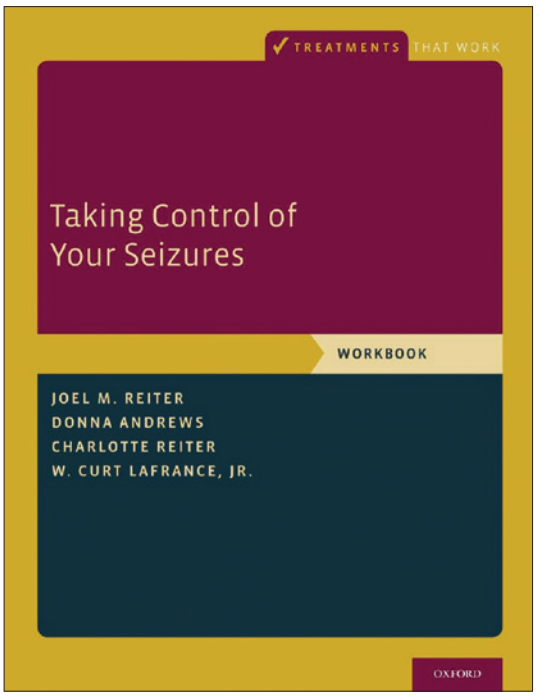
Instruction Manual for a Healthy Brain

Allan Bernstein, MD



Taking Control of Your Seizures, Joel Reiter, Donna Andrews, Charlotte Reiter, Curt LaFrance, Oxford University Press, 336 pages (2015).

This workbook is a follow-up to the authors' original work, *Taking Control of Your Epilepsy* (1987). The title's shift from *epilepsy* to *seizures* is a critical change that reflects the understanding, built up over the years, that not all seizures are epileptic. Sudden changes in brain function interfering with continuity of thoughts, emotions and actions can be considered seizures, and learning to prevent them and deal with them effectively is the focus of this work.

The term *non-epileptic seizure* is relatively new. These events were previously called pseudo seizures, psychogenic seizures or just "faking it." Another important new term, *physiologic, non-epileptic events,* applies to seizures induced by physiological events (e.g., drug withdrawal, hyponatremia, eclampsia). Such seizures are not considered epilepsy either, as they are unlikely to recur except under similar physiological stress.

Dr. Bernstein, a Sebastopol neurologist, serves on the SCMA Editorial Board.

Taking Control of Your Seizures is a guide to brain health. Starting with typical epilepsy and the associated electrical dysrhythmias, it carefully walks the reader through the triggers and warning signs of seizures. It offers guidelines to monitoring not only the events, but the small changes in lifestyle that may increase or decrease the frequency and severity of these events. As physicians, we often give advice on medication compliance, the need for adequate sleep, avoiding hypoglycemia and other physiological stressors. We don't do as well in identifying the more personal issues that can trigger seizures, such as anger, fear, frustration and anxiety. Patients using this workbook are encouraged to get training in how to monitor their health, use behavior modification techniques and collaborate with the medical community.

The section on medications, with detailed charts for patients to fill out, could be a teaching tool for all of us. It makes possible regular documentation of the effect of medications on seizures, as well as side effects. By the time we see patients in the office, time constraints limit our ability to adequately assess whether the benefits of seizure control are more important than the side effects of chronic medication use. We rarely ask the question. If we did, we might be surprised by the answer.

Taking Control of Your Seizures extensively discusses non-epileptic seizures (NES), which can be as disabling as epilepsy, yet are often poorly recognized and treated. Identifying the events and drawing up a roadmap of causes and treatments

requires sustained effort from both patient and practitioner. Here, the focus is on behavior modification. Because this is a workbook, there are charts to fill out and homework to do every step of the way. Each chapter refers to the preceding ones in filling out seizure logs, and in identifying triggering events, emotional shifts and behavior changes (either accomplished or planned).

The workbook emphasizes the role of stress on the body, as stress affects not just the brain, but also the circulatory, respiratory, digestive, musculoskeletal and endocrine systems. Stress affects balance, motor performance and communication. We get "tongue tied" when nervous and clumsy when under stress. Clearly, taking care of seizure triggers will affect more than just seizures.

The authors also review non-pharmacological treatments, including relaxation and breathing exercises and the importance of "down time." The use of biofeedback is discussed as well, although the emphasis is more on self-help than technology. The workbook also discusses the use, and importance, of a seizure counselor. I'm not aware of this job description in the local community, but since some of the authors are local, it would be reasonable to ask them for suggestions.

As a neurologist, I see a great many people with seizures and also read a significant number of normal EEGs where the request is to "rule out seizures." Does a normal reading mean there is no epilepsy or that these people all have NES? There may be a large community of people with unrecognized and untreated NES. This book might be an appropriate teaching tool for them.

Migraine is another neurologic condition with episodic, disabling events, often with identified and unidentified trigger factors. It is more common than epilepsy and creates significant disability for many people during their working years. Virtually every section of this workbook could also apply to migraine. Dealing with medications, stress, diet, sleep issues, anger and anxiety would all work for migraine. Tracking known, unknown and unidentified trigger factors could influence control of migraine as well as of seizures. There is a significant comorbidity between migraine and seizures, and many of the same drugs are used preventively. This workbook, with a minimal change in its title and a little editing of some chapters, would make an excellent headache manual.

Overall, *Taking Control of Your Seizures* is an important update to the previous edition, as it is more broadly focused and acknowledges the limitations of traditional medical models. It should be highly recommended not just to patients, but also to their families and caregivers.

Broadening the definition of seizures to the medical community will significantly improve our ability to diagnose and treat some of our more refractory patients. ◇

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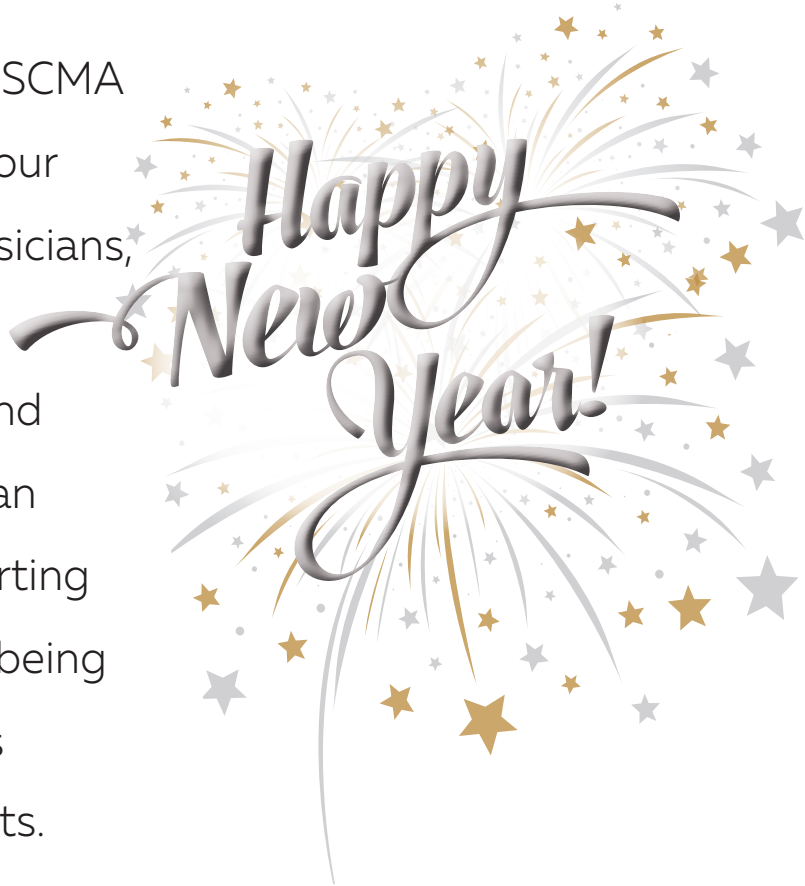
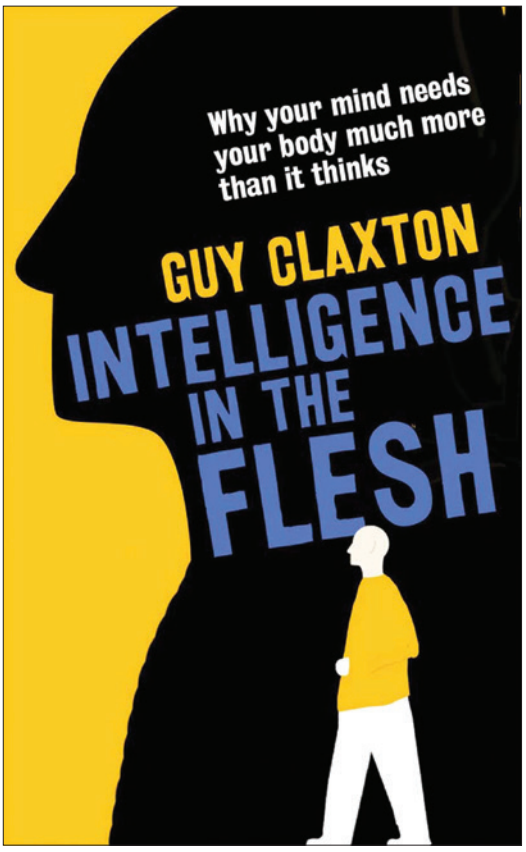
S · C · M · A

At this time of year, SCMA would like to thank our **571** practicing physicians, **39** residents and medical students, and **212** retired physician members for supporting the health and well being of Sonoma County's **500,000** residents.



The Body Intimate

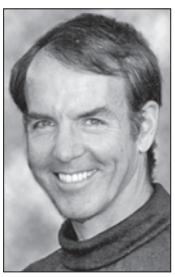
Brien Seeley, MD



Intelligence in the Flesh: Why Your Mind Needs Your Body Much More Than It Thinks, Guy Claxton, Yale University Press, 344 pages (2015).

Recent discoveries in neuroscience reveal that nearly every part of your body affects what happens in your brain. Professor Guy Claxton of the University of Winchester, who is gifted at presenting complex science in vivid and understandable prose, masterfully explains this brain-body interaction in *Intelligence in the Flesh.* His wonderful expose of the intimacy between brain and body turns out to be a fascinating story with major implications for health professionals.

The new model of brain physiology that Claxton describes is known as "embodied cognition." The model breaks sharply with the traditional Cartesian model of consciousness as a mysterious emanation from the brain that acts as an aloof executive. Embodied cognition instead views the brain-body as a decipherable unit with intricate two-way connections. The model validates that a holistic approach to brain and body is essential to medical care and medical research. More important, embodied cognition illuminates the valuable understanding that we are, as Claxton puts it, "verbs, not nouns." According to Claxton, "We are like whirlpools and eddies in a river that cannot be taken home in a bucket," to which he adds, "The body isn't a thing, it's an event. We exist by happening … if we stop happening, we quickly start to fall apart."



Dr. Seeley, a Santa Rosa ophthalmologist, serves on the SCMA Editorial Board.

Embodied cognition's view is that, down to even the level of molecular forces, we are myriad, interconnected, teeming paths of senses, energy flows and purposeful actions. Claxton views each of us as a miraculous constellation of mainly autonomous subsystems operating in a larger, superordinate system. There is a definite spirit of "we're all in this together," which seems aligned with Carl Sagan's famous 1980 quote on *Cosmos,* "We're made of star stuff."

Ophthalmologists used to proclaim proudly that the eyes are actually an extension of the brain. The elaborate connections that Claxton documents both supersede the exclusivity of this claim and present many essential functions that were heretofore unappreciated. These elegantly networked functions have great value for current research in artificial intelligence and sentient vehicles. They displace older concepts of how the brain works and its capacities and theoretical limitations. And some of the functions are downright entertaining.

Among these is the effect of body position on mood and mentation. Claxton describes a study that affirmed the old adage of "warm hands, warm heart." Subjects, who were placed in a situation with either a warm or cold desktop mouse pad, responded with either "warm" (generous, caring) or "cold" (selfish, greedy) behaviors, respectively. Similarly, people placed in slouched postures exhibited careless

and ineffective test responses, while those exhorted to stand up straight and proud exhibited greater determination and achievement. People who placed their hand over their heart behaved more honestly; those who crossed their arms were more stubborn. Despite Lady Macbeth's ironic "a little water clears us of this deed," Claxton points to a study showing that physically washing your hands does actually reduce how guilty you feel about a misdemeanor.

When the motor part of the brain is getting ready to make a move, it sends the sensory part of the brain a "carbon copy" message about what the sensory part should anticipate feeling as the move is made. The gut and its microbiota send chemical messages to the brain. So do the heart, the bladder, the kidneys, the skin and all the proprioceptive musculoskeletal sensors. These signals, in turn, result in efferent nerve actions from the brain to modulate or correct these organs. This bidirectional communication, in Claxton's elegant simile, operates like a continuously moving ocean wave, attentive to what is rising up on its face and letting go of what is receding down its back slope. At any moment, this rolling wave comprehends the equation of state of the entire body. The wave constantly updates our autonomous self-awareness and occasionally our consciousness.

"Priming" is another impressive phenomenon. Our perceptions are automatically weighted, without any conscious effort, by inner egocentric processes that relate to our abilities and needs. As Claxton observes, "Hoping, wanting and fearing are already dissolved in perception." Our emotions and memories play a powerful role in how we think and act by premolding our perceptions faster than thought. So does our prior learning. The mere act of reading the word *mug* or seeing a picture of a coffee mug has been shown to activate the motor nerve paths involved in grasping such a mug.

Embodied cognition recognizes that the automaticity of the brain is so vast and difficult to access with conscious thought that we are really at its mercy. The model contends that what wells up into consciousness is conceived by the body-brain's elaborate processes prior to and without our deliberation. The implications of this are that, to a substantial degree, our basic mental health is built in and our free will is largely imagined. But Claxton recognizes that such fatalism is clearly tempered by the lasting influences of child rearing, moral teachings and culture. Indeed, it is these important influences upon the brain-body that offer the greatest potential for creating a peaceful society.

According to Claxton, decision-making is a special illustrative case: "As your body-brain is weighing up the situation, it may well identify not just one but several courses of action that could be 'the best thing to do next.'" Imagine walking on a lonely street when a stranger appears and approaches from the opposite direction. Your serenity is broken with an increasing urgency to decide whether to say "hello," to cross the street to avoid eye contact, or to feign indifference as if preoccupied with some other task. Claxton points out, "When the choice between candidates for action is tight, or when a good deal hangs on getting it right, inhibition can arrest the selection process."

Tense scenarios are a setup for anxiety to get in the way and cause a regrettable decision, sometimes with life-changing consequences. In the clench of the moment, the brain does not do its holistic best at deciding because its receptivity and perception are momentarily suppressed. The result can be adverse outcomes in situations that range from surgical error to failed romance. These bad outcomes are why we sometimes wish we could just rewind and redo such moments so we can perform the way we later realize would have been best.

Claxton next distinguishes the operation of emotions in embodied cognition as the overlord of the many new notions of intelligence conjured by others: emotional intelligence, rational intelligence, linguistic intelligence and bodily-kinesthetic intelligence. He insists, "Emotions are a deep, bodily-based constituent of every kind of human intelligence. Emotions are what make the world meaningful. If we perceived the world only with rational understanding, leached of emotional significance, we would not last long, and while we did last, we would find no fulfillment in our survival." Further on, he adds, "When your emotions are engaged, you mind enough to think well." Learning and memory are also enhanced when emotions are engaged.

Claxton goes on to describe the astonishingly comprehensive physiological effects of emotion on the body-brain. These include blood pressure; heart rate; breathing rate and depth; gastrointestinal chemistry and motility; blood and lymph composition; posture; facial expression; voice quality; skin color and sweatiness; raising of body hair; muscle tension; eye movements; and pupil and nostril size.

Embodied cognition even extends to imagination. Claxton notes, "When we mentally rehearse a skill, brain networks specific to that skill become active and are modified as a result. You can literally improve your physical strength just by imagining yourself exercising the relevant muscles." Before you attempt to bench-press a heavy weight, try visualizing your pectoral muscles as huge and the weight as small. The lift becomes noticeably easier, according to Claxton. A similar phenomenon is supported in a recent article in *The Atlantic* describing studies in which athletes were studied for their abilities to visualize targets.[1]

Claxton's exploration of embodied cognition is corroborated by other recent studies that are not covered in his book. Examples include epigenetic control of memory,[2] cerebrospinal fluid's rinsing of the brain during sleep,[3] newly understood neurologic functions of glial cells,[4] and how blood influences pericytes and endothelium in brain vasculature.[5]

Other chapters in Claxton's book address the effects of exercise, language, biofeedback, mindfulness and focusing on the brain-body. The portion on consciousness is especially interesting. Here Claxton urges us to toss aside the concept that consciousness is some brightly lit theatrical stage in our head. On the contrary, Claxton says that consciousness does not reside in any real location in the brain. He defines consciousness in terms of a self-organizing, dynamic process in which thoughts and awareness unfurl or well up from the complex ever-buzzing network of body-brain connections.

Claxton envisions these connections to be like four fronds of a fern: one for sensing internal body states, the second for externally sensed signals, the third for readying muscle groups for action, and the fourth for formulating gestures and linguistics. Some of these are nuanced and some are very direct. All attest to an elaborate and underappreciated brain-body intimacy.

I highly recommend *Intelligence in the Flesh* to both health professionals and the lay public for its important and clearly presented new insights into how our brain-bodies work. ◇

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MYSTERY CASE SOLUTION

"MIKE" is a previously healthy young male with a multisystem illness. He presented with three weeks of cough and intermittent fevers, with an associated 20-pound weight loss. Late into his illness he developed lower back pain, urinary retention, and bilateral lower extremity weakness and muscle pain. His workup included a CT scan of the chest, which showed tree-in-bud opacities as well as some ground glass micronodules and lower lobe atelectasis. MRI of the lumbar spine did not identify any acute pathology. A lumbar puncture two days after Mike defervesced showed lymphocytic pleocytosis with normal glucose and protein.

One of the most salient aspects of Mike's case is the lymphocytic pleocytosis of the cerebrospinal fluid. This profile, with normal glucose and protein, is characteristic of aseptic meningitis, typically associated with viral infections. The most commonly encountered viral agents of aseptic meningitis are the enteroviruses and the herpesviruses, most notably herpes simplex virus and, to a lesser extent, varicella-zoster virus. Only the enteroviruses, however, would be associated with respiratory tract symptoms in an otherwise healthy young man. One such virus, enterovirus D68, has been in the news recently, notoriously associated with acute flaccid paralysis. Mike did have lower extremity weakness, but not to the point of paralysis.

Tuberculosis can also present with an aseptic lymphocytic meningitis in the context of respiratory symptoms. Indeed, the Quantiferon assay was reported to be "indeterminate," and Mike did have a 20-pound weight loss. Several lines of reasoning argue against tuberculosis, however. Mike's chest imaging studies were not consistent with reactivation tuberculosis. That type of tuberculosis, which is rare in native-born American citizens, classically affects the upper lobes, especially in otherwise immunocompetent patients. Primary tuberculosis is even rarer in the United States, and Mike did not have any identifiable exposures. In addition, his neuromuscular symptoms could not be explained. Finally, the very fact that the Quantiferon assay was indeterminate and not positive argues against a diagnosis of primary pulmonary tuberculosis. In an outbreak of primary tuberculosis at a school, the test was positive in 100% of cases.[1] While 100% sensitivity for primary tuberculosis may not be generally reproducible across all studies, the absence of a positive test is reassuring.

The most likely unifying diagnosis for Mike is mycoplasma infection, a well-acknowledged cause of prolonged cough and classically found in Mike's 20–30 age group.[2] Mycoplasma infections are rarely associated with severe extrapulmonary complications, of which the central and peripheral nervous system is the most common target. CNS complications range from meningitis to encephalitis and transverse myelitis. Fortunately there was no clinical evidence of encephalitis, and the MRI showed no transverse myelitis. The observation by Mike's mother that his legs seemed not to be moving in synchrony with his hips might reflect cerebellar ataxia, another one of the CNS manifestations. Myositis has been reported rarely, which could account for the muscle pain.

Mike remained hospitalized for eight days. He received moxifloxacin and continued it on discharge to complete 14 days of therapy. On follow-up with his primary care physician three days after discharge, Mike was walking better but was still weak, and his mycoplasma pneumoniae IgM was positive at 7000. By Christmas, he was back at work. ◇

—David Sidney, MD

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Awards Dinner 2015

SCMA honored five local physicians, a politician, a committee and a fund-raising project at its 31st annual Awards Dinner on Dec. 2, 2015. Held at the Vintners Inn in Santa Rosa, the event attracted more than a hundred physicians, spouses and guests.

The awardees, as shown left to right in the photo above, were (front row) Dr. Richard Powers, Barbara Ramsey, Dr. Tara Scott, (back row) Stephen Gale (representing Congressman Mike Thompson), Dr. Len Klay, Dr. Jan Sonander, Dr. Richard Andolsen and Dr. Brad Drexler.

Drs. Sonander, Drexler and Klay, along with Congressman Thompson, received the Outstanding Contribution to Sonoma County Medicine award for their successful decade-long effort to update Medicare's Geographic Practice Cost Index (GPCI) and to abolish the Sustainable Growth Rate (SGR). Dr. Sonander is a Santa Rosa family physician, Dr. Drexler a Healdsburg ob-gyn, and Dr. Klay a Santa Rosa ob-gyn.

Dr. Powers, a Sebastopol family physician, received the Outstanding Contribution to the Community award for his leadership in transforming Sebastopol's shuttered Palm Drive Hospital into the Sonoma West Medical Center, which opened last year.

Dr. Andolsen, a Healdsburg family physician, received the Outstanding Contribution to SCMA award on behalf of SCMA's Medical Review Advisory Committee (MRAC), which he has chaired for many years. The committee offers confidential peer review to determine factors influencing medical professional liability claims in Sonoma County.

Dr. Scott, a Santa Rosa family physician, received the Article of the Year award for "Planned Birth at Home," which appeared in the Spring 2015 issue of *Sonoma Medicine*. Her groundbreaking article explores why a growing number of Sonoma County physicians and other health professionals choose home birth.

Barbara Ramsey received the Recognition of Achievement award on behalf of the SCMA Alliance Foundation Holiday Greeting Card project, which she chairs. The project raises money for scholarships awarded to qualified students entering a medically related field.

Outstanding Contribution to the Community
Dr. Richard Powers *and presenter Dr. Nancy Davidson*

SCMA President
Dr. Mary Maddux-González *and her husband, Dr. Enrique González-Mendez*

Outstanding Contribution to SCMA
Dr. Richard Andolsen, *MRAC chair, and presenter Audrey Pulis*

Outstanding Contribution to SCMA
MRAC members **Dr. Lela Emad** *and* **Dr. Abdul Harris**

Outstanding Contribution to SCMA
MRAC member **Dr. James Hunt** *and his wife, Lisa Yoshida*

Outstanding Contribution to SCMA
MRAC member **Dr. Dan Lightfoot** *and his wife, Meta*

Outstanding Contribution to Sonoma County Medicine: GPCI and SGR Warriors
(left to right) **Dr. Jan Sonander, Dr. Len Klay, Congressman MIke Thompson** *and* **Dr. Brad Drexler.**

Outstanding Contribution to SCMA
MRAC member **Dr. Paul Marguglio** *and his wife, Jeanne*

Outstanding Contribution to SCMA
MRAC member **Dr. Ron Van Roy** *and his wife, Mary*

Article of the Year
Dr. Tara Scott *and presenter Dr. Mark Sloan*

Recognition of Achievement
Barbara Ramsey *and her husband, Dr. Bill Ramsey*

All photos by Will Bucquoy

Awards Dinner Program

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Tell Your Story To Inspire the Next Generation of Doctors

Maria Pappas

Drs. Joseph, Vidaurri and Mortensen

Life stories can forge a strong connection between physicians and young people. When you share your experiences of what influenced you to become a doctor, what challenges you overcame and what you learned, young people come to understand you as a real person. Telling your story can bring hope and inspiration to them as they ponder whether medicine is the right path for them.

As you tell your story, they can begin to imagine their own story of how they will enter medicine. To encourage them further, you can describe the SCMA & SCMAA Health Careers Scholarships, which are funded by donations from our generous community of physician families. These scholarships are a vote of confidence that will stiffen young people's resolve as they begin their journey to serve others, participate in healing and make the world a better place.

Ms. Pappas is VP of marketing and communications for the SCMA Alliance Foundation.

Below, three local physicians—Drs. Matt Joseph, David Vidaurri and Lynn Mortensen—offer their own stories, based on a few simple questions.

How did you decide to become a physician?

Dr. Joseph: I realized halfway through my undergraduate years that I wanted to do something in this life that involved head, heart and service to others. The more I thought about medicine, the more I realized it matched what I wanted to do and be in the world.

Dr. Vidaurri: I knew from early adolescence that I would pursue a career in medicine. I was later reminded of this by a friend who noted I told her during middle school that I would someday be a doctor. I was fortunate in many ways to see my goal come to fruition.

Dr. Mortensen: I thought my dermatologist was the nicest, funniest man around—very kind with awkward teens! He seemed to have the right words along with the right medicine. He was a good listener, and his caring came through his kindness in listening as well as his humor. As time passed, I decided that medicine would be the area in which I would earn my degree.

What challenges did you overcome?

Dr. Vidaurri: Coming from a small town and meager beginnings with food stamps, "government cheese" and powdered milk was my biggest challenge; however, I was blessed with a very large extended family all within the same town. Every holiday was spent with dozens of cousins and two sets of grandparents. It wasn't until I got to college that I found out how this was not the norm for most people and how fortunate I was to have had that experience as a child.

Dr. Mortensen: The biggest challenges were staying on track—I was also lucky to earn a few small scholarships that often came "in the nick of time." The biggest challenges were often psychological: worrying about grades, balancing work, gaining real-life experience in medicine and research—all at the same time.

Receiving small scholarships not only helped cover some of the expenses, but it was like receiving a vote of confidence: it put wind in my sails, and having these other people join my team, in a sense, gave me further motivation and reason not to let them down.

Who influenced you to pursue a medical career?

Dr. Vidaurri: My mother was my biggest inspiration to pursue medicine. She and my father attended San Francisco State University in the early '70s with three children. My parents separated and my mother returned to Hanford and raised my brothers and me while completing her degree at Fresno State and becoming a laboratory technologist. Her days and nights of studying followed by days and nights of work were my role model for my work ethic. She never pushed me to become a doctor. I had an internal drive to do my homework and perform well.

Dr. Joseph: My mother influenced me. In watching her start medical school at age 47, and also establish the best relationship of her life with another woman after two marriages, I realized that most of the limits we have are the ones we impose on ourselves. She also carries herself with a sense of service to others that I admire tremendously, and probably fail to match on a daily basis.

What advice would you give to the upcoming generation of physicians and health care professionals?

Dr. Mortensen: I think working with people and having work that truly helps is a gift. If a person is lucky and lives a long life, having work that you continue to feel is valuable is a gift. I would say, learn two languages and go out and interview people doing all types of work in health care so you can get a good sense of the options. There are many less traveled paths in medicine that may be a great fit for people with different talents.

Dr. Joseph: The more I practice medicine, the more I realize what a privilege it is to be called on to enter people's lives, to be trusted to help them, to have work with real meaning, day in and day out, and to be paid well to do so. There is no other work like it in the world.

Dr. Vidaurri: I would advise all students to "make your own luck," work hard and strive. Specific to health care I would say to pursue your dream IF you are doing it for the love of altruism rather than title or compensation. There are more dollars to be earned elsewhere for less workload. However, to make a positive difference in the lives of people seeking medical care is a great gift that returns satisfaction in spades for the hours and energy put into the journey to arrive as a practicing physician; as well as those hours put in to maintain that practice.

Please join the SCMA Alliance Foundation in celebrating the 50th year of the Holiday Greeting Card fundraiser, which allows us to award Health Careers Scholarships to students with exceptional academic records and proven financial needs. Your donations are welcome throughout the year, but special dates include March 30, in honor of National Doctor's Day; May or June in remembrance of your graduation from medical school; at any time in observance of a loved one's passing; and during the holidays when your name will be included in the Holiday Greeting Card.

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Cortney Harper, MD, Obstetrics & Gynecology, Tulane Univ 2005

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Sarah Wehrli, MD, Ophthalmology

3975 Old Redwood Hwy., Santa Rosa

Lars Hansen, MD, Pediatrics*, Boston Univ

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New Health Laws 2016

The California Legislature had an active year, passing more than 130 new laws affecting health care, with a particular focus on health care coverage, public health issues and end-of-life care. Summaries of selected laws appear below.

Allied Health Professionals

(19 new laws)

Midwives (SB 407) authorizes a health care provider to employ or contract licensed midwives for the purpose of providing comprehensive perinatal services.

Midwife Assistants (SB 408) authorizes a midwife assistant to perform certain assistive activities under the supervision of a licensed midwife or certified nurse-midwife, including administering medicine, withdrawing blood, and providing technical support services.

Drug Prescribing & Dispensing

(4 new laws)

CURES Registration (AB 679) extends existing law requiring a licensed health care practitioner providing care or services to an individual to apply to the Department of Justice to obtain approval to access information contained in the CURES database regarding the controlled substance history of a patient under his or her care.

End of Life

(3 new laws)

Physician-Assisted Suicide (ABX2 15) authorizes an adult who has been determined by his or her attending physician to be suffering from a terminal illness to request a drug for the purpose of ending his or her life.

Life-Sustaining Treatment Forms (AB 637) authorizes a nurse practitioner or physician assistant acting under the supervision of a physician to create a valid Physician Orders for Life Sustaining Treatment form.

Health Care Coverage

(14 new laws)

Farm Workers Medical Plan (SB 145) requires the state to reimburse the RFK Farm Workers Medical Plan up to $3 million per year for claim payments that exceed $70,000 for a single episode of care.

Prescription Drugs (SB 282) requires the state to develop a uniform prior authorization form by the end of 2016 and requires prescribing providers to use only those forms or electronic processes by the end of June 2017.

Solicitation and Enrollment (SB 388) requires group health and health insurers to provide a written summary of benefits and coverage under the Affordable Care Act and to comply with requirements applicable to those documents.

Rate Review (SB 546) requires large group health care service plans and health insurers to file with the state all required rate information for any product prior to any proposed rate increase.

Health Facilities & Financing

(24 new laws)

Residential Care Facilities Licensing (AB 601) requires the applicant for the licensure of a residential care facility for the elderly to disclose specified information upon initial application. Further requires the cross-checking of specified information from the application.

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Treatment Facilities (AB 848) authorizes a licensed adult alcoholism or drug abuse recovery or treatment facility to allow a physician to provide incidental medical services to a resident of the facility under specified limited circumstances.

Care Facility Penalties, Deficiencies and Appeals (AB 1387) authorizes any person to request an investigation of a residential care facility for the elderly by making a complaint to the Department of Social Services.

Medi-Cal

(9 new laws)

Immigration Status (SB 4) requires individuals under 19 years of age enrolled in restricted-scope Medi-Cal to be enrolled in the full scope of Medi-Cal benefits pursuant to an eligibility and enrollment plan.

Medical Marijuana

(5 new laws)

Medical Marijuana Regulations (AB 243) requires specified state agencies to promulgate regulations or standards relating to medical marijuana and its cultivation. Requires state agencies to mitigate the impact that marijuana cultivation has on the environment.

Physician Prescribing of Medical Marijuana (SB 643) sets forth standards for a physician prescribing medical cannabis and requires that the Medical Board of California prioritize its investigative and prosecutorial resources to identify and discipline physicians who have improperly recommended excessive cannabis to patients. Prohibits a recommending physician from accepting any form of remuneration from a licensed dispensary facility. Sets forth standards for the licensed cultivation of medical cannabis.

Medical Practice & Ethics

(8 new laws)

Medical Treatment of Prisoners (AB 1423) establishes a process for a licensed physician to file for a determination of a prisoner’s capacity to give informed consent and whether a surrogate decision maker should be appointed.

Medical Records & Privacy
(8 new laws)

Encryption (AB 964) defines "encrypted" to mean rendered unusable, unreadable or indecipherable to an unauthorized person through a security technology or methodology generally accepted in the field of information technology. Relates to existing law regarding disclosure of computerized personal information.

Mental Health
(13 new laws)

Foster Care Psychotropic Medication (SB 238) requires a report on the number of psychotropic medications authorized for children in foster care. Requires foster care public health nurses to receive training on administering such medications.

Involuntary Medication in Prisons (SB 453) authorizes a treating psychiatrist to request that a facility medical director designate another psychiatrist to act in place of the psychiatrist for purposes of involuntary medication.

Dementia Guidelines Workgroup (SB 613) requires the Department of Public Health to convene a workgroup to update the Guidelines for Alzheimer's Disease Management to address changes in the health care system.

Office Safety
(2 new laws)

Medical Waste (SB 225) limits the application of the requirement that biohazard film bags used for transport be marked and certified by the manufacturer as having passed specified tests only to those bags used to transport biohazard from the generator's facility to a treatment and disposal facility.

Licensing & Discipline
(5 new laws)

Professions & Vocations (SB 467) requires the Attorney General's Office to submit annual reports on consumer complaints concerning a professional licensed under a Department of Consumer Affairs agency.

Public Health
(11 new laws)

Vaccinations (SB 277) eliminates the exemption from school immunization requirements based upon personal beliefs. Exempts pupils in a home-based private school and students enrolled in an independent study program who do not receive classroom-based instruction.

Vapor Products Sales to Minors (AB 216) prohibits the sale of any device intended to deliver a non-nicotine product in a vapor state to a person under 18 years of age. Exempts drug or medical devices that have been approved by the FDA.

Epinephrine Auto-Injectors (SB 738) prohibits an authorizing physician from liability for issuing a prescription or order of emergency epinephrine auto-injectors to a qualified supervisor of health or administrator at a school district.

Use of Antimicrobial Drugs on Livestock (SB 27) prohibits administering medically important antimicrobial drugs to livestock unless prescribed by a licensed veterinarian or a feed directive. Also prohibits administering such drugs to livestock solely for purposes of promoting weight gain or improving feed efficiency.

Reproductive Issues
(3 new laws)

Reproductive FACT Act (AB 775) requires a licensed covered facility to disseminate a notice to all clients that the state has public programs for immediate free or low-cost access for eligible women to family planning services, prenatal care and abortion. Requires an unlicensed covered facility to disseminate a notice that the facility is not licensed as a medical facility by the state.

Workers' Compensation
(6 new laws)

Workers' Compensation Medication Formulary (AB 1124) requires the administrative director to establish a drug formulary for medications prescribed in the workers' compensation system. Also requires the administrative director to meet and consult with stakeholders prior to adoption of the formulary.

These are just a sampling of the new laws impacting health care in 2016 and beyond. For a complete list, see "Significant New California Laws of Interest to Physicians for 2016" in CMA's online resource library at www.cmanet.org/resources-library.

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Partnering for Community Health

Mary Maddux-González, MD

Two thousand fifteen was an eventful and productive year for SCMA and our physician members. The 31st Annual SCMA Awards Dinner in December capped off the year and gave us a chance to recognize and reflect upon the key leadership role of our members and partners. Over the course of SCMA's 155-year history, members have provided leadership in improving the practice of medicine, community health and access to high quality medical care. SCMA physician leadership has been most effective when done in collaboration with our local, state and national partners. As we move into 2016, SCMA will continue to provide leadership through collaboration in several local initiatives of importance to physicians and our community.

SCMA is participating in three of these initiatives through our collaboration with the Sonoma County Committee for Healthcare Improvement (CHI). CHI is a committee of Health Action, the countywide framework and organization to improve health and well-being in Sonoma County. CHI is composed of representatives of all major local medical groups, SCMA, hospitals, and the county's departments of Health Services and Human Services. Dr. Margaret Gilford is the SCMA board representative on CHI, which has three priority initiatives that cut across all local practice and hospital settings: My Care, My Plan; Hearts of Sonoma County; and the Opioid Prescribing Workgroup.

Dr. Maddux-González, chief medical officer for the Redwood Community Health Coalition, is president of SCMA.

My Care, My Plan is a community initiative for advanced-care planning. SCMA participants include Drs. Tim Gieseke, Gary Johanson, Margaret Marquez and Ellie Wiener. The initiative encourages local residents to have "the conversation" about their wishes for medical care in situations where they cannot speak for themselves, and to document their wishes through an Advance Health Care Directive. The vision of My Care, My Plan is for every adult in Sonoma County to become educated and empowered about expressing and documenting their wishes for end-of-life care, and to see their wishes honored.

Hearts of Sonoma County, an initiative to reduce the county's cardiovascular mortality and morbidity, is co-chaired by SCMA members Dr. Bo Greaves and Dr. Jason Cunningham. For this initiative, all the major primary care provider groups in Sonoma County are collectively focusing on improving hypertension control through population health strategies that include shared clinical guidelines, team-based care, data analysis and community engagement. Partners include SCMA, Kaiser Permanente, Annadel, Sutter, Northern California Medical Associates, local community health centers, the Northern California Center for Well-Being, the American Heart Association and the Sonoma County Department of Health Services.

The Opioid Prescribing Group is co-chaired by two SCMA members: Dr. Karen Milman, public health officer for Sonoma County, and Dr. Lisa Ward, chief medical officer for Santa Rosa Community Health Centers. The epidemic of prescription opioid overuse and overdose has led to the deaths of over 7,400 Californians in the past five years, and it has resulted in high medical and societal costs. The Opioid Prescribing Group includes representatives from all the major primary care groups and emergency departments in Sonoma County, as well as Public Health and Partnership Health Plan. Their goal is to address this critical issue through collective, coordinated action, including shared opioid prescribing guidelines.

In addition to SCMA's active partnership with CHI on these important initiatives, we will continue our leadership in many other areas and advance the priorities that you, our members, have identified through the SCMA Strategic Plan. The current strategic plan began in 2013 and goes through 2018, with an intended update in 2016. Your input into the process of updating the strategic plan is needed to ensure that SCMA is meeting your needs and carrying out its work in accordance with your priorities.

All physicians in Sonoma County will be receiving a survey in January related to the strategic plan. The survey results will help to inform our work at the SCMA board's strategic planning session this spring. Your input into the SCMA Strategic Plan is essential. We encourage you to complete the survey and provide your suggestions and feedback so that SCMA can most effectively advance the priorities that are of greatest importance to you.

Thank you, and best wishes for a happy and healthy 2016! ◇

Email: mmgonzalez@rchc.net

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